United States Department of Agriculture

Natural Resources Conservation Service

In cooperation with Virginia Polytechnic Institute and State University, New River Soil and Water Conservation District, Grayson County Board of Commissioners, and Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation

Soil Survey of Grayson County, Virginia

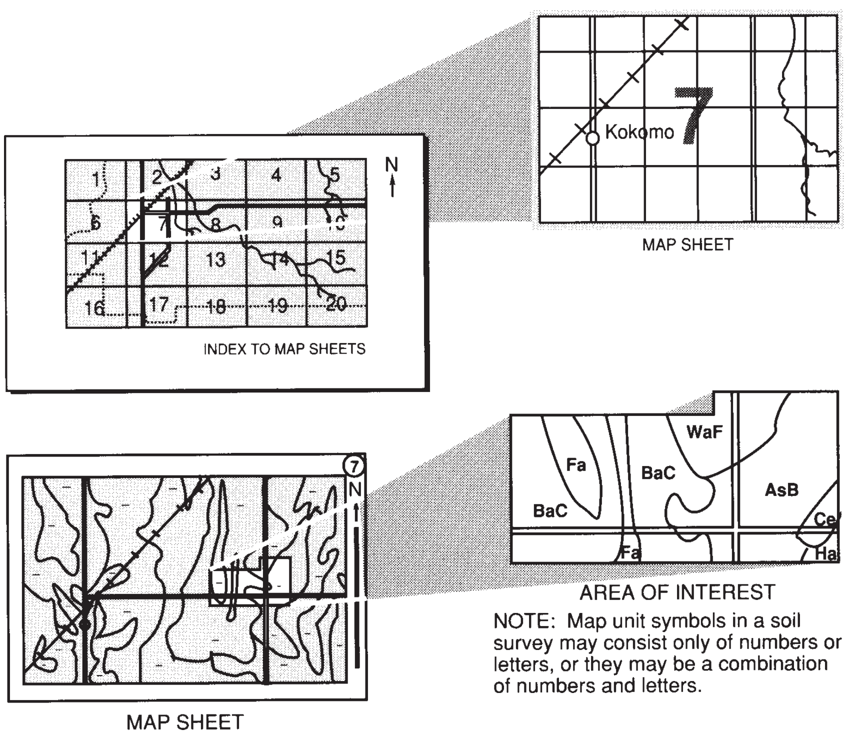
How To Use This Soil Survey

The detailed soil maps can be useful in planning the use and management of small areas.

To find information about your area of interest, locate that area on the **Index to Map Sheets**. Note the number of the map sheet and go to that sheet.

Locate your area of interest on the map sheet. Note the map unit symbols that are in that area. Go to the **Contents**, which lists the map units by symbol and name and shows the page where each map unit is described.

The **Contents** shows which table has data on a specific land use for each detailed soil map unit. Also see the **Contents** for sections of this publication that may address your specific needs.



This soil survey is a publication of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (formerly the Soil Conservation Service) has leadership for the Federal part of the National Cooperative Soil Survey. This survey was made cooperatively by the Natural Resources Conservation Service, the Virginia Polytechnic Institute and State University, the New River Soil and Water Conservation District, the Grayson County Board of Commissioners, and the Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation. The survey is part of the technical assistance furnished to the New River Soil and Water Conservation District. The Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation, and the Grayson County Board of Commissioners provided financial assistance for the survey.

Major fieldwork for this soil survey was completed in 1997. Soil names and descriptions were approved in 1998. Unless otherwise indicated, statements in this publication refer to conditions in the survey area in 1998. The most current official data are available at http://websoilsurvey.nrcs.usda.gov/app/.

Soil maps in this survey may be copied without permission. Enlargement of these maps, however, could cause misunderstanding of the detail of mapping. If enlarged, maps do not show the small areas of contrasting soils that could have been shown at a larger scale.

Cover: A view of the low mountains and foothills (which occur at elevations of less than 4,000 feet) in the central part of Grayson County, looking northeast from the Grayson Highlands State Park (at a elevation of about 5,000 feet). The highest mountains in Virginia are located here.

Additional information about the Nation's natural resources is available online from the Natural Resources Conservation Service at http://www.nrcs.usda.gov.

Contents

Issued 2008

Foreword

Soil surveys contain information that affects land use planning in survey areas. They include predictions of soil behavior for selected land uses. The surveys highlight soil limitations, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

Soil surveys are designed for many different users. Farmers, foresters, and agronomists can use the surveys to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the surveys to plan land use, select sites for construction, and identify special practices needed to ensure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the surveys to help them understand, protect, and enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. The information in this report is intended to identify soil properties that are used in making various land use or land treatment decisions. Statements made in this report are intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described, and information on specific uses is given. Help in using this publication and additional information are available at the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

John A. Bricker
State Conservationist
Natural Resources Conservation Service

Soil Survey of
Grayson County, Virginia

By Robert K. Conner, Natural Resources Conservation Service

Fieldwork by Robert K. Conner, Jaime Valentin Gonzalez, and Timothy T. Anders, Natural Resources Conservation Service

United States Department of Agriculture, Natural Resources Conservation Service, in cooperation with
Virginia Polytechnic Institute and State University, New River Soil and Water Conservation District, Grayson County Board of Commissioners, and Virginia Department of Conservation and Recreation, Division of Soil and Water Conservation

GRAYSON COUNTY is in the southwestern part of Virginia, about 90 miles southwest of Roanoke, Virginia (fig. 1). Grayson County has a total of 252,900 acres, or 395 square miles.

This soil survey updates the previous survey of Grayson County *(18)*. It provides additional information and an aerial photography base for the maps.

In 2000, the population of the survey area was 17,917 *(19)*. Independence, which is near the center of the county, is the county seat.

Farming and forestry are the major land uses in the county. The survey area is about 60 percent woodland and 40 percent farmland. Most of the farms produce beef cattle, dairy products, corn, hay, and burley tobacco. Wood products and textiles are the major manufactured goods. Fraser firs, which are sold as Christmas trees, are grown extensively in parts of the county, especially in the central and western sections.

General Nature of the Survey Area

This section provides general information about the survey area. It describes early history; water resources; transportation; physiography, relief, and drainage; and climate.

Early History

Prior to the first settlements of Europeans in the 1760’s, the survey area was part of the hunting grounds of various eastern Native American tribes. Most of the early European settlers were Scotch-Irish, German, or English. Many had traveled southwest on the “Old Buffalo Trail” or “Great Road” through the Valley of Virginia from Pennsylvania, in search of farmland. A significant number of settlers also came north from North Carolina to settle in the upper New River Valley.

Grayson County was formed on November 7, 1792, from the southern section of Wythe County. The county was named for William Grayson, one of Virginia’s first two United States Senators. Elk Creek was one of the first sections of the county to be

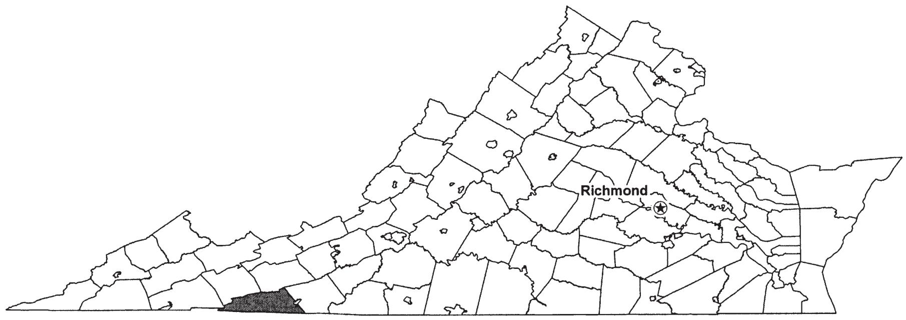


Figure 1.—Location of Grayson County in Virginia.

permanently settled. The first court was held on May 21, 1793, in a barn owned by William Bourne, a resident of Elk Creek. The first church in the county was known as the Hale Meeting House; it was also located in Elk Creek.

In 1850, Independence was established as the county seat.

Water Resources

The New River and its tributaries—Chestnut Creek, Elk Creek, Fox Creek, Little River, and Wilson Creek—are the major streams in the county (fig. 2). Two dams have been constructed on the New River. One is located near the town of Fries and the other is located near Mouth of Wilson.

Transportation

Four major highways serve the area. U.S. Route 58 provides access to points east and west through the county. U.S. Route 21 crosses the central part of the county and provides access to points north and south. State Route 16 crosses the western end of the county and provides access to points north and south. The Blue Ridge Parkway crosses the southeastern tip of the county, south of Galax, and is accessed via State Route 89.

Physiography, Relief, and Drainage

Grayson County is entirely within the Blue Ridge Major Land Resource Area. The county is largely mountainous, especially in the western section and along the northern rim (fig. 3). The central and eastern parts of the county are characterized by intermingled valleys, surrounded by rolling hills, knobs, and isolated mountain ridges. The mountains in the western part of the county are mainly volcanic in origin and formed in residuum and colluvium from rhyolite. The mountains along the northern rim of the county mainly formed in residuum from metasandstone, quartzite, and phyllite. The rolling upland and valley areas in the central and eastern parts of the county dominantly formed in residuum from quartz monzonite, gneiss, granite, and schist and in colluvium from the surrounding ridges and knobs.

The Tennessee Valley Divide, in the southwest corner and northwest edge of the survey area, breaks the drainage systems in the county into two sections. The larger portion of the county southeast of the divide drains into the New River. The small portion of the county northwest of the divide drains into the South Fork of the Holston River (in Smyth County). Hounshell Branch, Parks Creek, Buckeye Branch, High Trestle Branch, and Horseshoe Bend Branch are the principle streams which flow northwestwardly out of the county into the South Fork of the Holston River.

Figure 2.—The New River is a principle waterway in Grayson County. The confluence of New River is near the southern border of the county.

The elevation of the survey area ranges from 2,130 feet above sea level, where New River flows into Carroll County, Virginia, to 5,100 feet on Wilburn Ridge in the Grayson Highlands State Park. Mt. Rogers, which is in the Jefferson National Forest area of the county, has the highest elevation in Virginia, 5,729 feet.

Climate

Table 1 gives data on temperature and precipitation for the survey area as recorded at Transou, North Carolina, in the period 1961 to 1990. Table 2 shows probable dates of the first freeze in fall and the last freeze in spring. Table 3 provides data on the length of the growing season.

In winter, the average temperature is 33.3 degrees F and the average daily minimum temperature is 22.4 degrees. The lowest temperature on record, which occurred at Transou on January 21, 1985, is -24 degrees. In summer, the average temperature is 66.6 degrees and the average daily maximum temperature is 78.3 degrees. The highest temperature, which occurred at Transou on July 14, 1954, is 94 degrees.

Growing degree days are shown in table 1. They are equivalent to “heat units.” During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (50 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is 54.75 inches. Of this, 24.12 inches, or about 44 percent, usually falls in May through September. The growing season for most crops falls within this period. The heaviest 1-day rainfall during the period of record was 7.54 inches, recorded at Transou on August 13, 1996. Thunderstorms occur on about 44 days each year, and most occur in July.

Figure 3.—The mountainous topography of Grayson County.

The average seasonal snowfall is 26.1 inches. The greatest snow depth at any one time during the period of record was 35 inches, recorded on March 11, 1960. On an average, 21 days per year have at least 1 inch of snow on the ground. The heaviest 1-day snowfall on record was 24 inches, recorded on January 7, 1996.

The average relative humidity in mid-afternoon is about 60 percent. Humidity is higher at night, and the average at dawn is about 86 percent. The sun shines 58 percent of the time possible in summer and 57 percent in winter. The prevailing wind is from the west-southwest. Average windspeed is highest, 11.0 miles per hour, in March.

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a

considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

The descriptions, names, and delineations of the soils in this survey area do not fully agree with those of the soils in adjacent survey areas. Differences are the result of a better knowledge of soils, modifications in series concepts, or variations in the intensity of mapping or in the extent of the soils in the survey areas.

Detailed Soil Map Units

The map units delineated on the detailed soil maps represent the soils or miscellaneous areas in the survey area. The map unit descriptions in this section, along with the maps, can be used to determine the suitability and potential of a unit for specific uses. They also can be used to plan the management needed for those uses.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. The contrasting components are mentioned in the map unit descriptions. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives the principal hazards and limitations to be considered in planning for specific uses.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase

commonly indicates a feature that affects use or management. For example, Hayesville loam, 2 to 7 percent slopes, is a phase of the Hayesville series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Sylco-Sylvatus complex, 7 to 15 percent slopes, is an example.

This survey includes *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Pits, quarries, is an example.

Table 4 lists the map units in this survey area. Other tables give properties of the soils and the limitations, capabilities, and potentials for many uses. The Glossary defines many of the terms used in describing the soils.

1C—Balsam cobbly loam, 2 to 15 percent slopes, very bouldery

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles; on high mountains (fig. 4)
Position on the landform: Footslopes and toeslopes
Size of areas: 5 to 65 acres
Shape of areas: Irregular

Map Unit Composition

Balsam soil and similar inclusions: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 10 inches—very dark gray cobbly loam (very dark grayish brown, dry)
10 to 19 inches—dark brown cobbly loam (brown, dry)

Subsoil:
19 to 35 inches—yellowish brown very cobbly loam
35 to 48 inches—yellowish brown extremely cobbly loam

Substratum:
48 to 62 inches—yellowish brown extremely cobbly sandy loam

Minor Components

Dissimilar components:
- Nopan soils, which are poorly drained and have fewer rock fragments in the subsoil than the Balsam soil; in similar landform positions
- Bloodyhorse soils, which are moderately deep to hard bedrock; on summits, shoulders, and backslopes
- Soils that have fewer rock fragments and more clay in the subsoil than the Balsam soil; in similar landform positions
- Areas with rubbly surfaces in landform positions similar to those of the Balsam soil

Similar components:
- Balsam soils that have fewer boulders or stones on the surface

Figure 4.—An area of Balsam cobbly loam, 2 to 15 percent slopes, very bouldery. Northern hardwoods (dominantly sugar maple and yellow birch) are growing on this site.

- Mt Rogers soils on summits, shoulders, and backslopes
- Buzzrock soils, which are deep to hard bedrock; on summits, shoulders, and backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.5 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low

Runoff class: Low
Surface fragments: About 0.10 to 3.00 percent subangular boulders
Parent material: Colluvium derived from rhyolite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Poorly suited to northern red oak
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of rock fragments, excavation is difficult and cutbanks are unstable.
- Because of the low soil strength, this soil is unfavorable for supporting heavy loads.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: GG
Hydric soil: No

1D—Balsam cobbly loam, 15 to 35 percent slopes, very bouldery

Setting

Major land resource area: Blue Ridge (MLRA 130)

Figure 5.—Fraser fir and red spruce growing on a backslope in an area of Balsam cobbly loam, 15 to 35 percent slopes, very bouldery.

Landform: Coves, benches, and saddles; on high mountains
Position on the landform: Footslopes, toeslopes, and lower backslopes (fig. 5)
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Balsam soil and similar inclusions: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 10 inches—very dark gray cobbly loam (very dark grayish brown, dry)
10 to 19 inches—dark brown cobbly loam (brown, dry)

Subsoil:
19 to 35 inches—yellowish brown very cobbly loam
35 to 48 inches—yellowish brown extremely cobbly loam

Substratum:
48 to 62 inches—yellowish brown extremely cobbly sandy loam

Minor Components

Dissimilar components:
- Nopan soils, which are poorly drained and have fewer rock fragments in the subsoil than the Balsam soil; in similar landform positions

- Bloodyhorse soils, which are moderately deep to hard bedrock; on summits, shoulders, and backslopes
- Soils that have fewer rock fragments and more clay in the subsoil than the Balsam soil; in similar landform positions
- Areas with rubbly surfaces; in similar landform positions

Similar components:
- Balsam soils that have fewer boulders or stones on the surface
- Mt Rogers soils on summits, shoulders, and backslopes
- Buzzrock soils, which are deep to hard bedrock; on summits, shoulders, and backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.5 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent subangular boulders
Parent material: Colluvium derived from rhyolite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Poorly suited to northern red oak
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of rock fragments, excavation is difficult and cutbanks are unstable.
- Because of the low soil strength, this soil is unfavorable for supporting heavy loads.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: GG
Hydric soil: No

1E—Balsam cobbly loam, 35 to 55 percent slopes, very bouldery

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles; on high mountains
Position on the landform: Footslopes and lower backslopes
Size of areas: 5 to 450 acres
Shape of areas: Irregular

Map Unit Composition

Balsam soil and similar inclusions: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 10 inches—very dark gray cobbly loam (very dark grayish brown, dry)
10 to 19 inches—dark brown cobbly loam (brown, dry)

Subsoil:
19 to 35 inches—yellowish brown very cobbly loam
35 to 48 inches—yellowish brown extremely cobbly loam

Substratum:
48 to 62 inches—yellowish brown extremely cobbly sandy loam

Minor Components

Dissimilar components:
- Nopan soils, which are poorly drained and have fewer rock fragments in the subsoil than the Balsam soil; in similar landform positions

- Bloodyhorse soils, which are moderately deep to hard bedrock; on summits, shoulders, and backslopes
- Soils that have fewer rock fragments and more clay in the subsoil than the Balsam soil; in similar landform positions
- Areas with rubbly surfaces in landform positions similar to those of the Balsam soil

Similar components:
- Balsam soils that have fewer boulders or stones on the surface
- Mt Rogers soils on summits, shoulders, and backslopes
- Buzzrock soils, which are deep to hard bedrock; on summits, shoulders, and backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.5 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent subangular boulders
Parent material: Colluvium derived from rhyolite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Poorly suited to northern red oak
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of rock fragments, excavation is difficult and cutbanks are unstable.
- Because of the low soil strength, this soil is unfavorable for supporting heavy loads.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: GG
Hydric soil: No

2D—Balsam-Nopan complex, 15 to 35 percent slopes, very bouldery

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles; on high mountains
Position on the landform: Footslopes, toeslopes, and lower backslopes
Size of areas: 5 to 125 acres
Shape of areas: Irregular

Map Unit Composition

Balsam soil and similar inclusions: Typically 70 percent, ranging from about 60 to 75 percent
Nopan soil and similar inclusions: Typically 20 percent, ranging from about 15 to 25 percent

Typical Profile

Balsam

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 10 inches—very dark gray cobbly loam (very dark grayish brown, dry)
10 to 19 inches—dark brown cobbly loam (brown, dry)

Subsoil:
19 to 35 inches—yellowish brown very cobbly loam
35 to 48 inches—yellowish brown extremely cobbly loam

Substratum:
48 to 62 inches—yellowish brown extremely cobbly sandy loam

Nopan

Surface layer:
0 to 6 inches—very dark gray loam

Subsoil:
6 to 17 inches—gray loam
17 to 33 inches—grayish brown loamy sand; yellowish brown masses of oxidized iron
33 to 44 inches—brown sandy loam
44 to 50 inches—black and dark brown sandy loam

Substratum:
50 to 62 inches—yellowish brown sandy loam; yellowish brown masses of oxidized iron

Minor Components

Dissimilar components:
- Bloodyhorse soils, which are moderately deep to hard bedrock; on summits, shoulders, and backslopes
- Soils that have fewer rock fragments and more clay in the subsoil than the Balsam and Nopan soils; in similar landform positions
- Areas with rubbly surfaces in landform positions similar to those of the Balsam and Nopan soils

Similar components:
- Balsam soils that have fewer boulders or stones on the surface
- Mt Rogers soils, which are similar to the Balsam soil; on summits, shoulders, and backslopes
- Buzzrock soils, which are similar to the Balsam soil and deep to hard bedrock; on summits, shoulders, and backslopes
- Nopan soils that have fewer boulders or stones on the surface

Soil Properties and Qualities

Available water capacity: Balsam—moderate (about 8.5 inches); Nopan—moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Balsam—high (about 1.98 in/hr); Nopan—low (about 0.00 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Balsam—well drained; Nopan—poorly drained
Depth to seasonal water saturation: Balsam—more than 6 feet; Nopan—about 0 to 6 inches
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Balsam—medium; Nopan—very high
Surface fragments: About 0.10 to 3.00 percent subangular boulders
Parent material: Colluvium derived from rhyolite

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Poorly suited to northern red oak
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- Soil wetness may limit the use of log trucks.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

- Areas of the Balsam soil are well suited to Christmas trees; trees should not be planted in areas of the Nopan soil.

Building sites

- The seasonal high water table may restrict the period when excavations can be made.
- The slope influences the use of machinery and the amount of excavation required.
- Because of rock fragments, excavation is difficult and cutbanks are unstable.
- Because of the low soil strength, these soils are unfavorable for supporting heavy loads.
- Because of the high content of sand or gravel in the soil, sloughing is increased and cutbanks are more susceptible to caving.

Septic tank absorption fields

- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: Balsam—GG; Nopan—NN
Hydric soils: Balsam—no; Nopan—yes

2E—Balsam-Nopan complex, 35 to 55 percent slopes, very bouldery

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles; on high mountains
Position on the landform: Footslopes and lower backslopes
Size of areas: 5 to 125 acres
Shape of areas: Irregular

Map Unit Composition

Balsam soil and similar inclusions: Typically 70 percent, ranging from about 60 to 75 percent
Nopan soil and similar inclusions: Typically 20 percent, ranging from about 15 to 25 percent

Typical Profile

Balsam

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 10 inches—very dark gray cobbly loam (very dark grayish brown, dry)
10 to 19 inches—dark brown cobbly loam (brown, dry)

Subsoil:
19 to 35 inches—yellowish brown very cobbly loam
35 to 48 inches—yellowish brown extremely cobbly loam

Substratum:
48 to 62 inches—yellowish brown extremely cobbly sandy loam

Nopan

Surface layer:
0 to 6 inches—very dark gray loam

Subsoil:
6 to 17 inches—gray loam
17 to 33 inches—grayish brown loamy sand; yellowish brown masses of oxidized iron
33 to 44 inches—brown sandy loam
44 to 50 inches—black and dark brown sandy loam

Substratum:
50 to 62 inches—yellowish brown sandy loam; yellowish brown masses of oxidized iron

Minor Components

Dissimilar components:
- Bloodyhorse soils, which are moderately deep to hard bedrock; on summits, shoulders, and backslopes
- Soils that have fewer rock fragments and more clay in the subsoil than the Balsam and Nopan soils; in similar landform positions
- Areas with rubbly surfaces in landform positions similar to those of the Balsam and Nopan soils

Similar components:
- Balsam soils that have fewer boulders or stones on the surface
- Mt Rogers soils, which are similar to the Balsam soil; on summits, shoulders, and backslopes
- Buzzrock soils, which are similar to the Balsam soil and are deep to hard bedrock; on summits, shoulders, and backslopes
- Nopan soils that have fewer boulders or stones on the surface

Soil Properties and Qualities

Available water capacity: Balsam—moderate (about 8.5 inches); Nopan—moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Balsam—high (about 1.98 in/hr); Nopan—low (about 0.00 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Balsam—well drained; Nopan—poorly drained
Depth to seasonal water saturation: Balsam—more than 6 feet; Nopan—about 0 to 6 inches
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Balsam—medium; Nopan—very high
Surface fragments: About 0.10 to 3.00 percent subangular boulders
Parent material: Colluvium derived from rhyolite

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Poorly suited to northern red oak
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- Soil wetness may limit the use of log trucks.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

- Areas of the Balsam soil are well suited to Christmas trees; trees should not be planted in areas of the Nopan soil.

Building sites

- The seasonal high water table may restrict the period when excavations can be made.
- The slope influences the use of machinery and the amount of excavation required.
- Because of rock fragments, excavation is difficult and cutbanks are unstable.
- Because of the low soil strength, these soils are unfavorable for supporting heavy loads.
- Because of the high content of sand or gravel in the soil, sloughing is increased and cutbanks are more susceptible to caving.

Septic tank absorption fields

- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: Balsam—GG; Nopan—NN
Hydric soils: Balsam—no; Nopan—yes

3D—Bloodyhorse gravelly loam, 7 to 35 percent slopes, very bouldery

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on high mountains
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

Bloodyhorse soil and similar inclusions: Typically 80 percent, ranging from about 75 to 85 percent

Typical Profile

Surface layer:
0 to 12 inches—dark brown gravelly loam (dark yellowish brown, dry)

Subsoil:
12 to 28 inches—yellowish brown very gravelly loam

Substratum:
28 to 37 inches—yellowish brown extremely gravelly loam

Hard bedrock:
37 inches—granite bedrock

Minor Components

Dissimilar components:
- Mt Rogers soils, which are very deep to bedrock; on broad summits
- Soils that have more clay and fewer rock fragments in the subsoil than the Bloodyhorse soil; in similar landform positions
- Soils that are moderately well drained and very deep to bedrock; on concave footslopes and toeslopes
- Rock outcrops in landform positions similar to those of the Bloodyhorse soil

Similar components:
- Bloodyhorse soils that have fewer boulders or stones on the surface
- Buzzrock soils, which are deep to hard bedrock; in landform positions similar to those of the Bloodyhorse soil
- Burton soils, which have fewer rock fragments in the subsoil than the Bloodyhorse soil; in similar landform positions
- Soils that have a dark surface layer that is thinner than that of the Bloodyhorse soil; in similar landform positions
- Soils that have a dark surface layer that is thicker than that of the Bloodyhorse soil; in similar landform positions
- Soils that are shallow to hard bedrock; in landform positions similar to those of the Bloodyhorse soil

Soil Properties and Qualities

Available water capacity: Low (about 3.3 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.10 to 3.00 percent subangular boulders
Parent material: Creep deposits over residuum weathered from rhyolite, granite, and gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: JJ
Hydric soil: No

4F—Bloodyhorse gravelly loam, 35 to 80 percent slopes, extremely bouldery

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on high mountains
Position on the landform: Backslopes and very steep shoulders and summits
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Bloodyhorse soil and similar inclusions: Typically 80 percent, ranging from about 75 to 85 percent

Typical Profile

Surface layer:
0 to 12 inches—dark brown gravelly loam (dark yellowish brown, dry)

Subsoil:
12 to 28 inches—yellowish brown very gravelly loam

Substratum:
28 to 37 inches—yellowish brown extremely gravelly loam

Hard bedrock:
37 inches—granite bedrock

Minor Components

Dissimilar components:
- Soils that have more clay and fewer rock fragments in the subsoil than the Bloodyhorse soil; in similar landform positions
- Soils that are moderately well drained and very deep to bedrock; on concave footslopes and toeslopes
- Mt Rogers soils, which are very deep to bedrock; on broad summits
- Rock outcrops in landform positions similar to those of the Bloodyhorse soil

Similar components:
- Bloodyhorse soils that have fewer boulders or stones on the surface
- Buzzrock soils, which are deep to hard bedrock; in landform positions similar to those of the Bloodyhorse soil
- Burton soils, which have fewer rock fragments in the subsoil than the Bloodyhorse soil; in similar landform positions
- Soils that have a thinner dark surface layer than the Bloodyhorse soil; in similar landform positions
- Soils that have a thicker dark surface layer than the Bloodyhorse soil; in similar landform positions
- Soils that are shallow to hard bedrock; in landform positions similar to those of the Bloodyhorse soil

Soil Properties and Qualities

Available water capacity: Low (about 3.3 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 3.00 to 15.00 percent subangular boulders
Parent material: Creep deposits over residuum weathered from rhyolite, granite, and gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Because of the high content of surface rock fragments, this soil is unsuited to mechanical site preparation for planting and seeding.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: JJ
Hydric soil: No

5B—Braddock loam, 2 to 7 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Stream terraces, coves, and benches on foothills
Position on the landform: Risers and treads on stream terraces; footslopes and toeslopes in coves and on benches
Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

Braddock soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 8 inches—brown loam

Subsoil:
8 to 15 inches—strong brown clay loam
15 to 51 inches—red clay
51 to 62 inches—red clay loam

Minor Components

Dissimilar components:
- Braddock soils that have cobbly surface horizons
- Cowee and Pigeonroost soils, which are moderately deep to soft bedrock and have less clay in the subsoil than the Braddock soil; on summits, shoulders, and backslopes
- Areas with stony surfaces; in landform positions similar to those of the Braddock soil
- Rock outcrops in landform positions similar to those of the Braddock soil

Similar components:
- Tate soils, which have less clay in the subsoil than the Braddock soil; in similar landform positions
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Braddock soil
- Soils that have a browner subsoil than the Braddock soil; in similar landform positions
- Soils that have a clayey subsoil extending to below a depth of 60 inches; in landform positions similar to those of the Braddock soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Medium
Surface fragments: None

Parent material: Alluvium and/or colluvium derived from igneous rock and/or metamorphic rock

Use and Management Considerations

Cropland

Suitability: Well suited to corn and grass-legume hay; moderately suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The high clay content restricts the rooting depth of crops.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak and eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields

- This soil is well suited to septic tank absorption fields.

Local roads and streets

- Because of shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.
- The low soil strength is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: All areas are prime farmland
Land capability class: 2e
Virginia soil management group: O
Hydric soil: No

5C—Braddock loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Stream terraces, coves, and benches on foothills

Position on the landform: Risers and treads on stream terraces; footslopes and toeslopes in coves and on benches
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Braddock soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 8 inches—brown loam

Subsoil:
8 to 15 inches—strong brown clay loam
15 to 51 inches—red clay
51 to 62 inches—red clay loam

Minor Components

Dissimilar components:
- Braddock soils that have cobbly surface horizons
- Cowee and Pigeonroost soils, which are moderately deep to soft bedrock and have less clay in the subsoil than the Braddock soil; on summits, shoulders, and backslopes
- Rock outcrops in landform positions similar to those of the Braddock soil
- Areas with stony surfaces; in landform positions similar to those of the Braddock soil

Similar components:
- Tate soils, which have less clay in the subsoil than the Braddock soil; in similar landform positions
- Delanco soils which are moderately well drained; in landform positions similar to those of the Braddock soil
- Soils that have a brown subsoil; in landform positions similar to those of the Braddock soil
- Soils that have a clayey subsoil extending to below a depth of 60 inches; in landform positions similar to those of the Braddock soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Medium
Surface fragments: None
Parent material: Alluvium and/or colluvium derived from igneous rock and/or metamorphic rock

Use and Management Considerations

Cropland

Suitability: Well suited to grass-legume hay; moderately suited to corn and alfalfa hay

- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The high clay content restricts the rooting depth of crops.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak and white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.
- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: O
Hydric soil: No

5D—Braddock loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Stream terraces, coves, and benches on foothills
Position on the landform: Risers and treads on stream terraces; footslopes, toeslopes, and lower backslopes in coves and on benches
Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

Braddock soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 8 inches—brown loam

Subsoil:
8 to 15 inches—strong brown clay loam
15 to 51 inches—red clay
51 to 62 inches—red clay loam

Minor Components

Dissimilar components:
- Cowee and Pigeonroost soils, which are moderately deep to soft bedrock and have less clay in the subsoil than the Braddock soil; on summits, shoulders, and backslopes
- Rock outcrops in landform positions similar to those of the Braddock soil

Similar components:
- Braddock soils that have cobbly or stony surfaces
- Tate soils, which have less clay in the subsoil than the Braddock soil; in similar landform positions
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Braddock soil
- Soils that have a browner subsoil than the Braddock soil; in similar landform positions
- Soils that have a clayey subsoil extending to below a depth of 60 inches; in landform positions similar to those of the Braddock soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: High
Surface fragments: None
Parent material: Alluvium and/or colluvium derived from igneous rock and/or metamorphic rock

Use and Management Considerations

Cropland

Suitability: Moderately suited to corn, grass-legume hay, and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The high clay content restricts the rooting depth of crops.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak and eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil increases the difficulty of constructing haul roads and log landings when the soil is wet.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.
- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4e
Virginia soil management group: O
Hydric soil: No

6E—Braddock cobbly loam, 25 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Stream terraces, coves, and benches on foothills

Position on the landform: Risers and treads on stream terraces; footslopes, toeslopes, and lower backslopes in coves and on benches
Size of areas: 5 to 125 acres
Shape of areas: Irregular

Map Unit Composition

Braddock soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 8 inches—brown cobbly loam

Subsoil:
8 to 15 inches—strong brown cobbly clay loam
15 to 51 inches—red clay
51 to 62 inches—red clay loam

Minor Components

Dissimilar components:
- Cowee and Pigeonroost soils, which are moderately deep to soft bedrock and have less clay in the subsoil than the Braddock soil; on summits, shoulders, and backslopes
- Rock outcrops in landform positions similar to those of the Braddock soil

Similar components:
- Braddock soils that have fewer cobbles in the surface horizon
- Tate soils, which have less clay in the subsoil than the Braddock soil; in similar landform positions
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Braddock soil
- Soils that have a brown subsoil; in landform positions similar to those of the Braddock soil
- Soils that have a clayey subsoil extending to below a depth of 60 inches; in landform positions similar to those of the Braddock soil
- Areas with stony surfaces in landform positions similar to those of the Braddock soil
- Steeper areas of Braddock soils

Soil Properties and Qualities

Available water capacity: Moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: High
Surface fragments: None
Parent material: Alluvium and/or colluvium derived from igneous rock and/or metamorphic rock

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to northern red oak and eastern white pine; moderately suited to yellow-poplar

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.
- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: O
Hydric soil: No

7D—Brevard-Greenlee complex, 8 to 25 percent slopes, very bouldery

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves and benches on low mountains and foothills
Position on the landform: Footslopes, toeslopes, and moderately steep lower backslopes
Size of areas: About 20 acres
Shape of areas: Cresent to fan shaped or elongated

Map Unit Composition

Brevard soil and similar inclusions: Typically 50 percent, ranging from about 45 to 55 percent
Greenlee soil and similar inclusions: Typically 35 percent, ranging from about 30 to 40 percent

Typical Profile

Brevard

Surface layer:
0 to 8 inches—dark brown gravelly fine sandy loam

Subsoil:
8 to 12 inches—strong brown gravelly sandy clay loam
12 to 17 inches—yellowish red gravelly sandy clay loam
17 to 33 inches—red gravelly sandy clay loam
33 to 48 inches—yellowish red gravelly sandy clay loam

Substratum:
48 to 60 inches—yellowish red very gravelly fine sandy loam

Greenlee

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 7 inches—dark brown very cobbly loam

Subsurface layer:
7 to 14 inches—dark yellowish brown very cobbly sandy loam

Subsoil:
14 to 53 inches—yellowish brown very cobbly sandy loam

Substratum:
53 to 62 inches—yellowish brown extremely cobbly sandy loam

Minor Components

Dissimilar components:
- Cowee soils, which are moderately deep to soft bedrock; on summits, shoulders, and backslopes
- Tuckasegee soils, which have a thicker dark surface layer and fewer rock fragments in the subsoil than the Brevard and Greenlee soils; in similar landform positions
- Areas with rubbly surfaces in landform positions similar to those of the Brevard and Greenlee soils

Similar components:
- Soils that have a dark surface layer that is thicker than that of the Brevard soil; in similar landform positions
- Soils that have more rock fragments in the subsoil than the Brevard soil; in similar landform positions
- Evard soils, which are similar to the Brevard soil; on summits, shoulders, and backslopes
- Brevard soils that have fewer boulders or stones on the surface
- Soils that are similar to the Greenlee soil and have a thicker dark surface layer; in similar landform positions
- Greenlee soils that have fewer boulders or stones on the surface

Soil Properties and Qualities

Available water capacity: Brevard—moderate (about 7.6 inches); Greenlee—low (about 5.5 inches)
Slowest saturated hydraulic conductivity: Brevard—moderately high (about 0.57 in/hr); Greenlee—high (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Brevard—medium; Greenlee—low
Surface fragments: About 0.10 to 3.00 percent subrounded boulders
Parent material: Brevard—colluvium derived from igneous rock and/or metamorphic rock; Greenlee—colluvium and/or local alluvium derived from metamorphic rock and/or igneous rock

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to northern red oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.

- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

Suitability: Well suited

- Planting should be avoided in seeps, low-lying or depressional areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: Brevard—B; Greenlee—CC
Hydric soils: No

8C—Burton loam, 7 to 15 percent slopes, stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Broad ridges on high mountains
Position on the landform: Summits and shoulders
Size of areas: About 15 acres
Shape of areas: Irregular

Map Unit Composition

Burton soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 13 inches—very dark grayish brown loam (brown, dry)

Subsoil:
13 to 21 inches—yellowish brown loam

Substratum:
21 to 26 inches—yellowish brown very gravelly sandy loam

Soft bedrock:
26 to 31 inches—bedrock

Hard bedrock:
31 inches—bedrock

Minor Components

Dissimilar components:
- Soils that have more clay in the subsoil than the Burton soil; in similar landform positions
- Soils that are very deep to bedrock; in landform positions similar to those of the Burton soil
- Soils that are shallow to hard bedrock and have more rock fragments in the subsoil than the Burton soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Burton soil

Similar components:
- Burton soils that have fewer stones or cobbles on the surface
- Soils that have a thinner or lighter colored surface layer; in landform positions similar to those of the Burton soil

Soil Properties and Qualities

Available water capacity: Low (about 4.0 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.01 to 0.10 percent subangular stones
Parent material: Residuum weathered from metagraywacke, metasandstone, and phyllite

Use and Management Considerations

Cropland

Suitability: Poorly suited to grass-legume hay; not suited to corn and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- Rock fragments on the surface may restrict the operation of farm machinery and interfere with the emergence of seedlings.
- The limited available water capacity may cause plants to suffer from moisture stress.

Pastureland

Suitability: Poorly suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.
- Rock fragments on the surface may restrict the operation of farm machinery.

Woodland

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of the low soil strength, this soil is unfavorable for supporting heavy loads.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4s
Virginia soil management group: FF
Hydric soil: No

9D—Burton loam, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Broad ridges on high mountains
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 30 acres
Shape of areas: Irregular

Map Unit Composition

Burton soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 13 inches—very dark grayish brown loam (brown, dry)

Subsoil:
13 to 21 inches—yellowish brown loam

Substratum:
21 to 26 inches—yellowish brown very gravelly sandy loam

Soft bedrock:
26 to 31 inches—bedrock

Hard bedrock:
31 inches—bedrock

Minor Components

Dissimilar components:
- Soils that have more clay in the subsoil than the Burton soil; in similar landform positions
- Soils that are very deep to bedrock; in landform positions similar to those of the Burton soil
- Soils that are shallow to hard bedrock and have more rock fragments in the subsoil than the Burton soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Burton soil

Similar components:
- Burton soils that have fewer stones or boulders on the surface
- Soils that have a surface layer that is thinner or lighter colored than that of the Burton soil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Low (about 4.0 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.10 to 3.00 percent subangular stones
Parent material: Residuum weathered from metagraywacke, metasandstone, and phyllite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of the low soil strength, this soil is unfavorable for supporting heavy loads.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: FF
Hydric soil: No

9E—Burton loam, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Broad ridges on high mountains
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

Burton soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 13 inches—very dark grayish brown loam (brown, dry)

Subsoil:
13 to 21 inches—yellowish brown loam

Substratum:
21 to 26 inches—yellowish brown very gravelly sandy loam

Soft bedrock:
26 to 31 inches—bedrock

Hard bedrock:
31 inches—bedrock

Minor Components

Dissimilar components:
- Soils that have more clay in the subsoil than the Burton soil; in similar landform positions
- Soils that are very deep to bedrock; in landform positions similar to those of the Burton soil
- Soils that are shallow to hard bedrock and have more rock fragments in the subsoil than the Burton soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Burton soil

Similar components:
- Burton soils that have fewer stones or cobbles on the surface
- Soils that have a surface layer that is thinner or lighter colored than that of the Burton soil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Low (about 4.0 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.10 to 3.00 percent subangular stones
Parent material: Residuum weathered from metagraywacke, metasandstone, and phyllite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber

harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of the low soil strength, this soil is unfavorable for supporting heavy loads.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: FF
Hydric soil: No

10D—Chestnut-Peaks complex, 8 to 25 percent slopes, very rocky

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep upper backslopes
Size of areas: 5 to 25 acres
Shape of areas: Irregular
Note: 2 to 10 percent of the surface is covered with outcrops of hard gneiss bedrock

Map Unit Composition

Chestnut soil and similar inclusions: Typically 65 percent, ranging from about 60 to 70 percent
Peaks soil and similar inclusions: Typically 20 percent, ranging from about 15 to 25 percent

Typical Profile

Chestnut

Surface layer:
0 to 3 inches—very dark grayish brown gravelly fine sandy loam

Subsoil:
3 to 8 inches—dark yellowish brown gravelly fine sandy loam; few brown and common yellowish brown mottles
8 to 21 inches—light olive brown gravelly fine sandy loam; common yellowish brown mottles

Substratum:
21 to 29 inches—light olive brown gravelly fine sandy loam; common yellowish brown mottles

Soft bedrock:
29 to 45 inches—bedrock

Hard bedrock:
45 inches—bedrock

Peaks

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—dark yellowish brown very gravelly loam

Subsurface layer:
4 to 8 inches—dark yellowish brown very gravelly loam

Subsoil:
8 to 23 inches—yellowish brown very gravelly loam

Substratum:
23 to 32 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
32 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Rock outcrops in landform positions similar to those of the Chestnut and Peaks soils

Similar components:
- Cowee soils, which have more clay and redder colors in the subsoil than the Chestnut soil; in similar landform positions
- Soils that are similar to the Chestnut soil and have a brown subsoil; in similar landform positions
- Soils that have more rock fragments in the subsoil than the Chestnut soil; in similar landform positions
- Soils that are similar to the Chestnut soil and are moderately deep to hard bedrock; in similar landform positions
- Soils that have fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Soils that are similar to the Peaks soil and are shallow to hard bedrock; on convex summits, shoulders, and upper backslopes

Soil Properties and Qualities

Available water capacity: Chestnut—low (about 3.8 inches); Peaks—very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: Chestnut—high (about 1.98 in/hr); Peaks—high (about 5.95 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Chestnut—20 to 40 inches to bedrock (paralithic); Peaks—20 to 40 inches to bedrock (lithic)
Drainage class: Chestnut—well drained; Peaks—somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: Chestnut—about 0.01 to 0.09 percent subangular stones; Peaks—none
Parent material: Residuum weathered from granite and/or gneiss and/or schist

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

Suitability: Moderately suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- Rock fragments on the surface may restrict the operation of farm machinery.
- Rock outcrops may limit machinery operations.

Woodland

Suitability: Well suited to northern red oak and chestnut oak; moderately suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

- These soils are well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6s
Virginia soil management group: Chestnut—GG; Peaks—JJ
Hydric soils: No

10E—Chestnut-Peaks complex, 25 to 45 percent slopes, very rocky

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 100 acres
Shape of areas: Irregular
Note: 2 to 10 percent of the surface is covered with outcrops of hard gneiss bedrock

Map Unit Composition

Chestnut soil and similar inclusions: Typically 65 percent, ranging from about 60 to 70 percent
Peaks soil and similar inclusions: Typically 20 percent, ranging from about 15 to 25 percent

Typical Profile

Chestnut

Surface layer:
0 to 3 inches—very dark grayish brown gravelly fine sandy loam

Subsoil:
3 to 8 inches—dark yellowish brown gravelly fine sandy loam; few brown and common yellowish brown mottles
8 to 21 inches—light olive brown gravelly fine sandy loam; common yellowish brown mottles

Substratum:
21 to 29 inches—light olive brown gravelly fine sandy loam; common yellowish brown mottles

Soft bedrock:
29 to 45 inches—bedrock

Hard bedrock:
45 inches—bedrock

Peaks

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—dark yellowish brown very gravelly loam

Subsurface layer:
4 to 8 inches—dark yellowish brown very gravelly loam

Subsoil:
8 to 23 inches—yellowish brown very gravelly loam

Substratum:
23 to 32 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
32 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Rock outcrops in landform positions similar to those of the Chestnut and Peaks soils

Similar components:
- Cowee soils, which have more clay and redder colors in the subsoil than the Chestnut soil; in similar landform positions
- Soils that are similar to the Chestnut soil and have a brown subsoil; in similar landform positions
- Soils that have more rock fragments in the subsoil than the Chestnut soil; in similar landform positions
- Soils that are similar to the Chestnut soil and are moderately deep to hard bedrock; in similar landform positions
- Soils that have fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Soils that are similar to the Peaks soil and are shallow to hard bedrock; on convex summits, shoulders, and upper backslopes

Soil Properties and Qualities

Available water capacity: Chestnut—low (about 3.8 inches); Peaks—very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: Chestnut—high (about 1.98 in/hr); Peaks—high (about 5.95 in/hr)
Depth class: Moderately deep (20 to 40 inches)

Depth to root-restrictive feature: Chestnut—20 to 40 inches to bedrock (paralithic); Peaks—20 to 40 inches to bedrock (lithic)
Drainage class: Chestnut—well drained; Peaks—somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: Chestnut—about 0.01 to 0.09 percent subangular stones; Peaks—none
Parent material: Residuum weathered from granite, gneiss, and/or schist

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Well suited to northern red oak and chestnut oak; moderately suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.

Christmas trees

- These soils are well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.

- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: Chestnut—GG; Peaks—JJ
Hydric soils: No

11F—Chestnut-Peaks-Tuckasegee complex, 45 to 90 percent slopes, very rocky

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Chestnut and Peaks—upper backslopes and very steep shoulders and summits; Tuckasegee—footslopes and lower backslopes
Size of areas: 5 to 50 acres
Shape of areas: Irregular
Note: 2 to 10 percent of the surface is covered with outcrops of hard gneiss bedrock

Map Unit Composition

Chestnut soil and similar inclusions: Typically 40 percent, ranging from about 35 to 45 percent
Peaks soil and similar inclusions: Typically 25 percent, ranging from about 20 to 30 percent
Tuckasegee soil and similar inclusions: Typically 20 percent, ranging from about 15 to 25 percent

Typical Profile

Chestnut

Surface layer:
0 to 3 inches—very dark grayish brown gravelly fine sandy loam

Subsoil:
3 to 8 inches—dark yellowish brown gravelly fine sandy loam; few brown and common yellowish brown mottles
8 to 21 inches—light olive brown gravelly fine sandy loam; common yellowish brown mottles

Substratum:
21 to 29 inches—light olive brown gravelly fine sandy loam; common yellowish brown mottles

Soft bedrock:
29 to 45 inches—bedrock

Hard bedrock:
45 inches—bedrock

Peaks

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—dark yellowish brown very gravelly loam

Subsurface layer:
4 to 8 inches—dark yellowish brown very gravelly loam

Subsoil:
8 to 23 inches—yellowish brown very gravelly loam

Substratum:
23 to 32 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
32 inches—gneiss bedrock

Tuckasegee

Surface layer:
0 to 8 inches—very dark brown gravelly loam (brown, dry)

Surface layer:
8 to 13 inches—very dark grayish brown gravelly loam (dark yellowish brown, dry)

Subsoil:
13 to 28 inches—brown gravelly loam
28 to 47 inches—strong brown gravelly loam
47 to 79 inches—strong brown very gravelly loam

Minor Components

Dissimilar components:
- Rock outcrops in landform positions simlar to those of the major soils

Similar components:
- Soils that are similar to the Chestnut soil and have a brown subsoil; in similar landform positions
- Soils that are similar to the Peaks soil and are shallow to hard bedrock; on convex summits, shoulders, and upper backslopes
- Cullasaja and Greenlee soils, which have more rock fragments in the subsoil than the Tuckasegee soil; in similar landform positions
- Brevard soils, which have more clay and redder colors in the subsoil than the Tuckasegee soil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Chestnut—low (about 3.8 inches); Peaks—very low (about 1.6 inches); Tuckasegee—high (about 9.9 inches)
Slowest saturated hydraulic conductivity: Chestnut and Tuckasegee—high (about 1.98 in/hr); Peaks—high (about 5.95 in/hr)
Depth class: Chestnut and Peaks—moderately deep (20 to 40 inches); Tuckasegee—very deep (more than 60 inches)
Depth to root-restrictive feature: Chestnut—20 to 40 inches to bedrock (paralithic); Peaks—20 to 40 inches to bedrock (lithic); Tuckasegee—more than 60 inches

Drainage class: Chestnut and Tuckasegee—well drained; Peaks—somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Chestnut and Peaks—very high; Tuckasegee—medium
Surface fragments: About 0.01 to 0.09 percent subangular stones
Parent material: Chestnut and Peaks—residuum weathered from granite, gneiss, and/or schist; Tuckasegee—colluvium derived from igneous and metamorphic rock

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Well suited to northern red oak and chestnut oak; moderately suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

Suitability: Well suited
- South to southwest aspects on steep slopes become droughty and require additional management measures.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: Chestnut—GG; Peaks—JJ; Tuckasegee—G
Hydric soils: No

12A—Codorus loam, 0 to 3 percent slopes, frequently flooded

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Flood plains in valleys
Position on the landform: Steps and channels
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Codorus soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 7 inches—brown loam

Subsoil:
7 to 12 inches—brown loam
12 to 19 inches—brown loam; yellowish brown masses of oxidized iron
19 to 37 inches—yellowish brown loam; gray iron depletions

Substratum:
37 to 49 inches—yellowish brown gravelly sandy loam; gray iron depletions
49 to 62 inches—yellowish brown very gravelly sandy loam; gray iron depletions

Minor Components

Dissimilar components:
- Elsinboro soils, which are well drained and have more clay in the subsoil than the Codorus soil; on treads
- Delanco soils, which are moderately well drained and have more clay in the subsoil than the Codorus soil; on treads, footslopes, and toeslopes

- Craigsville soils, which are well drained and have more rock fragments in the subsoil than the Codorus soil; in similar landform positions
- Kinkora soils, which are poorly drained and have more clay in the subsoil than the Codorus soil; on treads

Similar components:
- Codorus soils that have cobbly or stony surfaces
- Hatboro soils, which are poorly drained; in landform positions similar to those of the Codorus soil
- Soils that have a dark surface layer; in landform positions similar to those of the Codorus soil

Soil Properties and Qualities

Available water capacity: Moderate (about 8.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Somewhat poorly drained
Depth to seasonal water saturation: About 12 to 24 inches
Water table kind: Apparent
Flooding hazard: Frequent
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Alluvium derived from igneous rock and/or metamorphic rock

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Well suited
- Flooding may damage pastures.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Well suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should focus on streamside management zones and stream crossings and should include general adherence to all applicable best management practices.
- Flooding may damage haul roads.
- Flooding restricts the safe use of roads by log trucks.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- Flooding is a limitation affecting building site development.

- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields

- Flooding is a limitation affecting septic tank absorption fields.
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Flooding may damage local roads and streets.
- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- The low soil strength may cause structural damage to local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6w
Virginia soil management group: A
Hydric soil: No

13A—Comus fine sandy loam, 0 to 3 percent slopes, frequently flooded

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Flood plains in valleys
Position on the landform: Steps and channels
Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

Comus soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 9 inches—dark yellowish brown fine sandy loam

Subsoil:
9 to 31 inches—dark yellowish brown fine sandy loam

Substratum:
31 to 53 inches—brown fine sandy loam; few yellowish brown mottles
53 to 62 inches—brown gravelly loamy sand

Minor Components

Dissimilar components:
- Elsinboro soils, which have more clay in the subsoil than the Comus soil; on treads
- Delanco soils, which are moderately well drained and have more clay in the subsoil than the Comus soil; on treads on stream terraces, footslopes, and toeslopes
- Codorus soils, which are somewhat poorly drained; in landform positions similar to those of the Comus soil

- Hatboro soils, which are poorly drained; in landform positions similar to those of the Comus soil
- Kinkora soils, which are poorly drained and have more clay in the subsoil than the Comus soil; on treads

Similar components:
- Soils that have a dark surface layer; in landform positions similar to those of the Comus soil
- Comus soils that have cobbly or stony surfaces
- Craigsville soils, which have more rock fragments in the subsoil than the Comus soil; in similar landform positions

Soil Properties and Qualities

Available water capacity: High (about 9.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: Frequent
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Alluvium derived from igneous rock and/or metamorphic rock

Use and Management Considerations

Cropland

Suitability: Well suited to corn, grass-legume hay, and alfalfa hay
- Frequent flooding restricts the use of winter grain crops.
- Flooding may damage crops.

Pastureland

Suitability: Well suited
- Flooding may damage pastures.

Woodland

Suitability: Well suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should focus on streamside management zones and stream crossings and should include general adherence to all applicable best management practices.
- Flooding may damage haul roads.
- Flooding restricts the safe use of roads by log trucks.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- Flooding is a limitation affecting building site development.

Septic tank absorption fields

- Flooding is a limitation affecting septic tank absorption fields.

Local roads and streets

- Flooding may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 2w
Virginia soil management group: A
Hydric soil: No

14C—Cowee loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

Cowee soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—brown loam

Subsoil:
6 to 27 inches—yellowish red clay loam

Substratum:
27 to 39 inches—multicolored gravelly sandy loam

Soft bedrock:
39 to 45 inches—bedrock

Minor Components

Dissimilar components:
- Cowee soils that have cobbly surface horizons
- Glenelg soils, which are very deep to bedrock; in landform positions similar to those of the Cowee soil
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which have more rock fragments and less clay in the subsoil than the Cowee soil; in similar landform positions
- Areas with stony surfaces in landform positions similar to those of the Cowee soil
- Rock outcrops in landform positions similar to those of the Cowee soil

Similar components:
- Soils that have a yellowish brown subsoil; in landform positions similar to those of the Cowee soil

Soil Properties and Qualities

Available water capacity: Low (about 4.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from schist and/or gneiss

Use and Management Considerations

Cropland

Suitability: Well suited to grass-legume hay; moderately suited to corn and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The limited available water capacity may cause plants to suffer from moisture stress.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to chestnut oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is

reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: N
Hydric soil: No

14D—Cowee loam, 15 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Cowee soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—brown loam

Subsoil:
6 to 27 inches—yellowish red clay loam

Substratum:
27 to 39 inches—multicolored gravelly sandy loam

Soft bedrock:
39 to 45 inches—bedrock

Minor Components

Dissimilar components:
- Glenelg soils, which are very deep to bedrock; in landform positions similar to those of the Cowee soil

- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which have more rock fragments and less clay in the subsoil than the Cowee soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Cowee soil

Similar components:
- Cowee soils that have cobbly or stony surfaces
- Soils that have a yellowish brown subsoil; in landform positions similar to those of the Cowee soil

Soil Properties and Qualities

Available water capacity: Low (about 4.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from schist and/or gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Moderately suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to chestnut oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: N
Hydric soil: No

14E—Cowee loam, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Cowee soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—brown loam

Subsoil:
6 to 27 inches—yellowish red clay loam

Substratum:
27 to 39 inches—multicolored gravelly sandy loam

Soft bedrock:
39 to 45 inches—bedrock

Minor Components

Dissimilar components:
- Glenelg soils, which are very deep to bedrock; in landform positions similar to those of the Cowee soil
- Tate soils, which are very deep to bedrock; on footslopes and toeslopes
- Peaks soils, which have more rock fragments and less clay in the subsoil than the Cowee soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Cowee soil

Similar components:
- Cowee soils that have cobbly or stony surfaces
- Soils that have a yellowish brown subsoil; in landform positions similar to those of the Cowee soil

Soil Properties and Qualities

Available water capacity: Low (about 4.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from schist and/or gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to chestnut oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: N
Hydric soil: No

15D—Cowee gravelly loam, 7 to 35 percent slopes, stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Cowee soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—brown gravelly loam

Subsoil:
6 to 27 inches—yellowish red gravelly clay loam

Substratum:
27 to 39 inches—multicolored gravelly sandy loam

Soft bedrock:
39 to 45 inches—bedrock

Minor Components

Dissimilar components:
- Glenelg soils, which are very deep to bedrock; in landform positions similar to those of the Cowee soil
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which have more rock fragments and less clay in the subsoil than the Cowee soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Cowee soil

Similar components:
- Cowee soils that have fewer stones or cobbles on the surface
- Soils that have a yellowish brown subsoil; in landform positions similar to those of the Cowee soil

Soil Properties and Qualities

Available water capacity: Low (about 3.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.01 to 0.10 percent stones
Parent material: Residuum weathered from schist and/or gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to chestnut oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: N
Hydric soil: No

15E—Cowee gravelly loam, 35 to 55 percent slopes, stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Cowee soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—brown gravelly loam

Subsoil:
6 to 27 inches—yellowish red gravelly clay loam

Substratum:
27 to 39 inches—multicolored gravelly sandy loam

Soft bedrock:
39 to 45 inches—bedrock

Minor Components

Dissimilar components:
- Glenelg soils, which are very deep to bedrock; in landform positions similar to those of the Cowee soil
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Peaks soils, which have more rock fragments and less clay in the subsoil than the Cowee soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Cowee soil

Similar components:
- Cowee soils that have fewer stones or cobbles on the surface
- Soils that have a yellowish brown subsoil; in landform positions similar to those of the Cowee soil

Soil Properties and Qualities

Available water capacity: Low (about 3.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.01 to 0.10 percent stones
Parent material: Residuum weathered from schist and/or gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to chestnut oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: N
Hydric soil: No

16D—Cowee-Rock outcrop complex, 7 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 25 acres
Shape of areas: Irregular

Map Unit Composition

Cowee soil and similar inclusions: Typically 60 percent, ranging from about 55 to 65 percent
Rock outcrop: Typically 35 percent, ranging from about 30 to 35 percent

Typical Profile

Cowee

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—brown loam

Subsoil:
6 to 27 inches—yellowish red clay loam

Substratum:
27 to 39 inches—multicolored gravelly sandy loam

Soft bedrock:
39 to 45 inches—bedrock

Rock outcrop

This part of the map unit consists of outcrops of mica schist and mica gneiss that are about 10 to 200 feet apart.

Minor Components

Dissimilar components:
- Peaks soils, which have less clay and more rock fragments in the subsoil than the Cowee soil; in similar landform positions
- Glenelg soils, which are very deep to bedrock; in landform positions similar to those of the Cowee soil
- Hayesville soils, which are very deep to soft bedrock and have more clay in the subsoil than the Cowee soil; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes

Similar components:
- Cowee soils that have cobbly or stony surfaces
- Soils that have a yellowish brown subsoil; in landform positions similar to those of the Cowee soil
- Areas with rock outcrops that are spaced more than 200 feet apart; in landform positions similar to those of the Cowee soil

Properties and Qualities of the Cowee Soil

Available water capacity: Low (about 4.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from schist and/or gneiss

Use and Management Considerations

Cropland

- This map unit is unsuited to cropland.

Pastureland

- This map unit is unsuited to pastureland.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to chestnut oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative

impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- The low soil strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Cowee—7s; Rock outcrop—8
Virginia soil management group: Cowee—N; Rock outcrop—none assigned
Hydric soils: Cowee—no; Rock outcrop—not rated

16E—Cowee-Rock outcrop complex, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits

Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Cowee soil and similar inclusions: Typically 60 percent, ranging from about 55 to 65 percent
Rock outcrop: Typically 35 percent, ranging from about 30 to 35 percent

Typical Profile

Cowee

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—brown loam

Subsoil:
6 to 27 inches—yellowish red clay loam

Substratum:
27 to 39 inches—multicolored gravelly sandy loam

Soft bedrock:
39 to 45 inches—bedrock

Rock outcrop

This part of the map unit consists of outcrops of mica schist and mica gneiss that are about 10 to 200 feet apart.

Minor Components

Dissimilar components:
- Peaks soils, which have less clay and more rock fragments in the subsoil than the Cowee soil; in similar landform positions
- Glenelg soils, which are very deep to bedrock; in landform positions similar to those of the Cowee soil
- Hayesville soils, which are very deep to soft bedrock and have more clay in the subsoil than the Cowee soil; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes

Similar components:
- Cowee soils that have cobbly or stony surfaces
- Soils that have a yellowish brown subsoil; in landform positions similar to those of the Cowee soil
- Areas with rock outcrops that are spaced more than 200 feet apart; in landform positions similar to those of the Cowee soil

Properties and Qualities of the Cowee Soil

Available water capacity: Low (about 4.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None

Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from schist and/or gneiss

Use and Management Considerations

Cropland

- This map unit is unsuited to cropland.

Pastureland

- This map unit is unsuited to pastureland.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to chestnut oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- The low soil strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Cowee—7s; Rock outcrop—8
Virginia soil management group: Cowee—N; Rock outcrop—none assigned
Hydric soils: Cowee—no; Rock outcrop—not rated

17A—Craigsville cobbly sandy loam, 0 to 3 percent slopes, frequently flooded

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Flood plains in valleys
Position on the landform: Steps and channels
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

Craigsville soil and similar inclusions: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Surface layer:
0 to 6 inches—brown cobbly sandy loam

Subsoil:
6 to 32 inches—yellowish brown very cobbly sandy loam

Substratum:
32 to 62 inches—yellowish brown extremely cobbly loamy sand

Minor Components

Dissimilar components:
- Elsinboro soils, which have fewer rock fragments and more clay in the subsoil than the Craigsville soil; on stream terraces
- Codorus soils, which have fewer rock fragments in the subsoil than the Craigsville soil and are somewhat poorly drained; in similar landform positions
- Kinkora soils, which have fewer rock fragments in the subsoil than the Craigsville soil and are poorly drained; on stream terraces
- Hatboro soils, which have fewer rock fragments in the subsoil than the Craigsville soil and are poorly drained; in similar landform positions
- Delanco soils, which have fewer rock fragments in the subsoil than the Craigsville soil and are moderately well drained; on stream terraces

Similar components:
- Comus soils, which have fewer rock fragments in the subsoil than the Craigsville soil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Low (about 3.8 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained

Depth to seasonal water saturation: More than 6 feet
Flooding hazard: Frequent
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very low
Surface fragments: None
Parent material: Alluvium derived from igneous rock and/or metamorphic rock

Use and Management Considerations

Cropland

Suitability: Moderately suited to grass-legume hay; poorly suited to corn; not suited to alfalfa hay
- The limited available water capacity may cause plants to suffer from moisture stress.
- Frequent flooding restricts the use of winter grain crops.
- Flooding may damage crops.

Pastureland

Suitability: Moderately suited
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.
- Flooding may damage pastures.

Woodland

Suitability: Well suited to northern red oak and eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should focus on streamside management zones and stream crossings and should include general adherence to all applicable best management practices.
- Flooding may damage haul roads.
- Flooding restricts the safe use of roads by log trucks.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- Flooding is a limitation affecting building site development.

Septic tank absorption fields

- Flooding is a limitation affecting septic tank absorption fields.

Local roads and streets

- Flooding may damage local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 2w
Virginia soil management group: CC
Hydric soil: No

18C—Cullasaja cobbly loam, 7 to 15 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Benches, coves, and saddles on low mountains and foothills
Position on the landform: Footslopes and toeslopes
Size of areas: About 3 acres
Shape of areas: Irregular

Map Unit Composition

Cullasaja soil and similar inclusions: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—very dark brown cobbly loam (brown, dry)
6 to 15 inches—very dark grayish brown very cobbly loam (brown, dry)
15 to 21 inches—dark brown very cobbly loam (dark yellowish brown, dry)

Subsoil:
21 to 34 inches—brown very cobbly loam
34 to 42 inches—dark yellowish brown very cobbly loam
42 to 62 inches—dark yellowish brown extremely cobbly sandy loam

Minor Components

Dissimilar components:
- Edneyville soils, which have fewer rock fragments in the subsoil than the Cullasaja soil; on summits, shoulders, and backslopes
- Pigeonroost soils, which are moderately deep to soft bedrock and have more clay and fewer rock fragments in the subsoil than the Cullasaja soil; on summits, shoulders, and backslopes
- Peaks soils, which are moderately deep to hard bedrock; on summits, shoulders, and upper backslopes
- Tate soils, which have fewer rock fragments and more clay in the subsoil than the Cullasaja soil and have a thinner or lighter colored surface layer; in similar landform positions at lower elevations
- Areas with rubbly surfaces; in landform positions similar to those of the Cullasaja soil

Similar components:
- Cullasaja soils that have bouldery surfaces
- Cullasaja soils that have fewer stones or cobbles on the surface
- Thunder soils, which have more clay in the subsoil than the Cullasaja soil; in similar landform positions

- Soils that have a dark surface layer that is thicker than that of the Cullasaja soil; in similar landform positions
- Soils that have a dark surface layer that is thinner than that of the Cullasaja soil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.1 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: About 0.10 to 3.00 percent subangular stones
Parent material: Colluvium derived from rhyolite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Moderately suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- Large stones on the surface may restrict the operation of some farm machinery.

Woodland

Suitability: Well suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying concave areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the low soil strength, this soil is unfavorable for supporting heavy loads.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6s
Virginia soil management group: FF
Hydric soil: No

18D—Cullasaja cobbly loam, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Benches, coves, and saddles on low mountains and foothills
Position on the landform: Footslopes, toeslopes, and lower backslopes
Size of areas: About 1 acre
Shape of areas: Irregular

Map Unit Composition

Cullasaja soil and similar inclusions: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—very dark brown cobbly loam (brown, dry)
6 to 15 inches—very dark grayish brown very cobbly loam (brown, dry)
15 to 21 inches—dark brown very cobbly loam (dark yellowish brown, dry)

Subsoil:
21 to 34 inches—brown very cobbly loam
34 to 42 inches—dark yellowish brown very cobbly loam
42 to 62 inches—dark yellowish brown extremely cobbly sandy loam

Minor Components

Dissimilar components:
- Edneyville soils, which have fewer rock fragments in the subsoil than the Cullasaja soil; on summits, shoulders, and backslopes
- Pigeonroost soils, which are moderately deep to soft bedrock and have more clay and fewer rock fragments in the subsoil than the Cullasaja soil; on summits, shoulders, and backslopes
- Peaks soils, which are moderately deep to hard bedrock; on summits, shoulders, and upper backslopes
- Tate soils, which have fewer rock fragments and more clay in the subsoil than the Cullasaja soil and have a thinner or lighter colored surface layer; in similar landform positions at lower elevations
- Areas with rubbly surfaces in landform positions similar to those of the Cullasaja soil

Similar components:
- Cullasaja soils that have bouldery surfaces
- Cullasaja soils that have fewer stones or cobbles on the surface
- Thunder soils, which have more clay in the subsoil than the Cullasaja soil; in similar landform positions
- Soils that have a dark surface layer that is thicker than that of the Cullasaja soil; in similar landform positions
- Soils that have a dark surface layer that is thinner than that of the Cullasaja soil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.1 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent subangular stones
Parent material: Colluvium derived from rhyolite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the low soil strength, this soil is unfavorable for supporting heavy loads.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: FF
Hydric soil: No

19A—Delanco fine sandy loam, 0 to 2 percent slopes, rarely flooded

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Stream terraces and alluvial fans in valleys; coves in foothills
Position on the landform: Treads on stream terraces; footslopes and toeslopes on alluvial fans and in coves
Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

Delanco soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 10 inches—dark yellowish brown fine sandy loam

Subsurface layer:
10 to 16 inches—yellowish brown fine sandy loam

Subsoil:
16 to 41 inches—yellowish brown sandy clay loam; light brownish gray iron depletions
41 to 47 inches—yellowish brown loam; light brownish gray iron depletions

Substratum:
47 to 62 inches—yellowish brown sandy loam; light brownish gray iron depletions

Minor Components

Dissimilar components:
- Delanco soils that have cobbly surface horizons
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil than the Delanco soil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil than the Delanco soil; on flood plains

- Craigsville soils, which have more rock fragments and less clay in the subsoil than the Delanco soil; on flood plains
- Kinkora soils, which are poorly drained and have more clay in the subsoil than the Delanco soil; in similar landform positions
- Areas with stony surfaces in landform positions similar to those of the Delanco soil

Similar components:
- Elsinboro soils, which are well drained; in landform positions similar to those of the Delanco soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Moderately well drained
Depth to seasonal water saturation: About 12 to 30 inches
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Low
Surface fragments: None
Parent material: Alluvium derived from igneous rock and/or metamorphic rock

Use and Management Considerations

Cropland

Suitability: Well suited to corn and grass-legume hay; moderately suited to alfalfa hay
- Frost action may damage the root system of winter grain crops.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pastureland

Suitability: Well suited
- Frost action may damage the root systems of plants.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- This soil is well suited to haul roads and log landings and to equipment operations.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- Flooding is a limitation affecting building site development.
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields

- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Because of shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.

Interpretive Groups

Prime farmland: Prime farmland if drained
Land capability class: 2w
Virginia soil management group: B
Hydric soil: No

19B—Delanco fine sandy loam, 2 to 7 percent slopes, rarely flooded

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Stream terraces and alluvial fans in valleys; coves in foothills
Position on the landform: Treads on stream terraces; toeslopes and footslopes on alluvial fans and in coves
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Delanco soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 10 inches—dark yellowish brown fine sandy loam

Subsurface layer:
10 to 16 inches—yellowish brown fine sandy loam

Subsoil:
16 to 41 inches—yellowish brown sandy clay loam; light brownish gray iron depletions
41 to 47 inches—yellowish brown loam; light brownish gray iron depletions

Substratum:
47 to 62 inches—yellowish brown sandy loam; light brownish gray iron depletions

Minor Components

Dissimilar components:
- Delanco soils that have cobbly surface horizons
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil than the Delanco soil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil than the Delanco soil; on flood plains
- Craigsville soils which have more rock fragments and less clay in the subsoil than the Delanco soil; on flood plains

- Kinkora soils, which are poorly drained and have more clay in the subsoil than the Delanco soil; in similar landform positions
- Areas with stony surfaces in landform positions similar to those of the Delanco soil

Similar components:
- Elsinboro soils, which are well drained; in landform positions similar to those of the Delanco soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Moderately well drained
Depth to seasonal water saturation: About 12 to 30 inches
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Medium
Surface fragments: None
Parent material: Alluvium derived from igneous rock and/or metamorphic rock

Use and Management Considerations

Cropland

Suitability: Well suited to corn and grass-legume hay; moderately suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- Frost action may damage the root system of winter grain crops.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- Soil wetness may limit the use of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- This soil is well suited to haul roads and log landings.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- Flooding is a limitation affecting building site development.
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields

- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Because of shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.

Interpretive Groups

Prime farmland: Prime farmland if drained
Land capability class: 2e
Virginia soil management group: B
Hydric soil: No

20C—Delanco fine sandy loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Stream terraces and alluvial fans in valleys; coves in foothills
Position on the landform: Treads on stream terraces; footslopes and toeslopes on alluvial fans and in coves
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

Delanco soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 10 inches—dark yellowish brown fine sandy loam

Subsurface layer:
10 to 16 inches—yellowish brown fine sandy loam

Subsoil:
16 to 41 inches—yellowish brown sandy clay loam; light brownish gray iron depletions
41 to 47 inches—yellowish brown loam; light brownish gray iron depletions

Substratum:
47 to 62 inches—yellowish brown sandy loam; light brownish gray iron depletions

Minor Components

Dissimilar components:
- Delanco soils that have cobbly surface horizons
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil than the Delanco soil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil than the Delanco soil; on flood plains

- Craigsville soils, which have more rock fragments and less clay in the subsoil than the Delanco soil; on flood plains
- Kinkora soils, which are poorly drained and have more clay in the subsoil than the Delanco soil; in similar landform positions
- Areas with stony surfaces in landform positions similar to those of the Delanco soil

Similar components:
- Elsinboro soils, which are well drained; in landform positions similar to those of the Delanco soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.20 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Moderately well drained
Depth to seasonal water saturation: About 12 to 30 inches
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Moderate
Runoff class: Medium
Surface fragments: None
Parent material: Alluvium derived from igneous rock and/or metamorphic rock

Use and Management Considerations

Cropland

Suitability: Well suited to corn and grass-legume hay; moderately suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- Frost action may damage the root system of winter grain crops.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- Soil wetness may limit the use of log trucks.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- This soil is well suited to haul roads and log landings.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- The seasonal high water table may restrict the period when excavations can be made.
- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.
- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- Because of shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: B
Hydric soil: No

21B—Edneytown loam, 2 to 7 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits
Size of areas: 5 to 175 acres
Shape of areas: Irregular

Map Unit Composition

Edneytown soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—brown loam

Subsurface layer:
4 to 7 inches—yellowish brown loam

Subsoil:
7 to 20 inches—strong brown sandy clay loam
20 to 27 inches—strong brown sandy loam

Substratum:
27 to 62 inches—brownish yellow loamy sand

Minor Components

Dissimilar components:
- Edneytown soils that have cobbly surface horizons
- Peaks soils, which are moderately deep to hard bedrock and have less clay and more rock fragments in the subsoil than the Edneytown soil; in similar landform positions
- Pigeonroost soils, which are moderately deep to soft bedrock; in landform positions similar to those of the Edneytown soil
- Areas with stony surfaces in landform positions similar to those of the Edneytown soil
- Rock outcrops in landform positions similar to those of the Edneytown soil

Similar components:
- Hayesville soils, which have more clay in the subsoil than the Edneytown soil; in similar landform positions
- Edneyville soils, which have less clay in the subsoil than the Edneytown soil; in similar landform positions
- Tate soils, which have a thicker solum than the Edneytown soil; on footslopes, toeslopes, and lower backslopes
- Soils that have a red subsoil; in landform positions similar to those of the Edneytown soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from gneiss, granite, and/or schist

Use and Management Considerations

Cropland

Suitability: Well suited to corn and grass-legume hay; moderately suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative

impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength may create unsafe conditions for log trucks.
- This soil is well suited to haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields

- Because the excessive permeability limits the proper treatment of the effluent from conventional septic systems, the water table may become polluted.
- This soil is well suited to septic tank absorption fields.

Local roads and streets

- This soil is well suited to local roads and streets.

Interpretive Groups

Prime farmland: All areas are prime farmland
Land capability class: 2e
Virginia soil management group: L
Hydric soil: No

21C—Edneytown loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Edneytown soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—brown loam

Subsurface layer:
4 to 7 inches—yellowish brown loam

Subsoil:
7 to 20 inches—strong brown sandy clay loam
20 to 27 inches—strong brown sandy loam

Substratum:
27 to 62 inches—brownish yellow loamy sand

Minor Components

Dissimilar components:
- Edneytown soils that have cobbly surface horizons
- Peaks soils, which are moderately deep to hard bedrock and have less clay and more rock fragments in the subsoil than the Edneytown soil; in similar landform positions
- Pigeonroost soils, which are moderately deep to soft bedrock; in landform positions similar to those of the Edneytown soil
- Areas with stony surfaces in landform positions similar to those of the Edneytown soil
- Rock outcrops in landform positions similar to those of the Edneytown soil

Similar components:
- Hayesville soils, which have more clay in the subsoil than the Edneytown soil; in similar landform positions
- Edneyville soils, which have less clay in the subsoil than the Edneytown soil; in similar landform positions
- Tate soils, which have a thicker solum than the Edneytown soil; on footslopes, toeslopes, and lower backslopes
- Soils that have a red subsoil; in landform positions similar to those of the Edneytown soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from gneiss, granite, and/or schist

Use and Management Considerations

Cropland

Suitability: Well suited to grass-legume hay; moderately suited to corn and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative

impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- This soil is well suited to haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: L
Hydric soil: No

21D—Edneytown loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Edneytown soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—brown loam

Subsurface layer:
4 to 7 inches—yellowish brown loam

Subsoil:
7 to 20 inches—strong brown sandy clay loam
20 to 27 inches—strong brown sandy loam

Substratum:
27 to 62 inches—brownish yellow loamy sand

Minor Components

Dissimilar components:
- Peaks soils, which are moderately deep to hard bedrock and have less clay and more rock fragments in the subsoil than the Edneytown soil; in similar landform positions
- Pigeonroost soils, which are moderately deep to soft bedrock; in landform positions similar to those of the Edneytown soil
- Rock outcrops in landform positions similar to those of the Edneytown soil

Similar components:
- Edneytown soils that have cobbly or stony surfaces
- Hayesville soils, which have more clay in the subsoil than the Edneytown soil; in similar landform positions
- Edneyville soils, which have less clay in the subsoil than the Edneytown soil; in similar landform positions
- Tate soils, which have a thicker solum than the Edneytown soil; on footslopes, toeslopes, and lower backslopes
- Soils that have a red subsoil; in landform positions similar to those of the Edneytown soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from gneiss, granite, and/or schist

Use and Management Considerations

Cropland

Suitability: Moderately suited to corn, grass-legume hay, and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4e
Virginia soil management group: L
Hydric soil: No

21E—Edneytown loam, 25 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Edneytown soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—brown loam

Subsurface layer:
4 to 7 inches—yellowish brown loam

Subsoil:
7 to 20 inches—strong brown sandy clay loam
20 to 27 inches—strong brown sandy loam

Substratum:
27 to 62 inches—brownish yellow loamy sand

Minor Components

Dissimilar components:
- Peaks soils, which are moderately deep to hard bedrock and have less clay and more rock fragments in the subsoil than the Edneytown soil; in similar landform positions
- Pigeonroost soils, which are moderately deep to soft bedrock; in landform positions simlar to those of the Edneytown soil
- Rock outcrops in landform positions similar to those of the Edneytown soil

Similar components:
- Edneytown soils that have cobbly or stony surfaces
- Hayesville soils, which have more clay in the subsoil than the Edneytown soil; in similar landform positions
- Edneyville soils, which have less clay in the subsoil than the Edneytown soil; in similar landform positions
- Tate soils, which have a thicker solum than the Edneytown soil; on footslopes, toeslopes, and lower backslopes
- Soils that have a red subsoil; in landform positions similar to those of the Edneytown soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from gneiss, granite, and/or schist

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber

harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: L
Hydric soil: No

21F—Edneytown loam, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and very steep shoulders and summits
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Edneytown soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—brown loam

Subsurface layer:
4 to 7 inches—yellowish brown loam

Subsoil:
7 to 20 inches—strong brown sandy clay loam
20 to 27 inches—strong brown sandy loam

Substratum:
27 to 62 inches—brownish yellow loamy sand

Minor Components

Dissimilar components:
- Peaks soils, which are moderately deep to hard bedrock and have less clay and more rock fragments in the subsoil than the Edneytown soil; in similar landform positions
- Pigeonroost soils, which are moderately deep to soft bedrock; in landform positions similar to those of the Edneytown soil
- Rock outcrops in landform positions similar to those of the Edneytown soil

Similar components:
- Edneytown soils that have cobbly or stony surfaces
- Hayesville soils, which have more clay in the subsoil than the Edneytown soil; in similar landform positions
- Edneyville soils, which have less clay in the subsoil than the Edneytown soil; in similar landform positions
- Tate soils, which have a thicker solum than the Edneytown soil; on footslopes, toeslopes, and lower backslopes
- Soils that have a red subsoil; in landform positions similar to those of the Edneytown soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from gneiss, granite, and/or schist

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber

harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: L
Hydric soil: No

22C—Edneytown-Urban land complex, 0 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 400 acres
Shape of areas: Irregular

Map Unit Composition

Edneytown soil and similar inclusions: Typically 60 percent, ranging from about 55 to 65 percent
Urban land: Typically 35 percent, ranging from about 30 to 35 percent

Typical Profile

Edneytown

Surface layer:
0 to 4 inches—brown loam

Subsurface layer:
4 to 7 inches—yellowish brown loam

Subsoil:
7 to 20 inches—strong brown sandy clay loam

Subsoil:
20 to 27 inches—strong brown sandy loam

Substratum:
27 to 62 inches—brownish yellow loamy sand

Urban land

Urban land consists of areas covered by highways, streets, parking lots, buildings, and other impervious surfaces.

Minor Components

Dissimilar components:
- Edneytown soils that have cobbly surface horizons
- Peaks soils, which are moderately deep to hard bedrock and have less clay and more rock fragments in the subsoil than the Edneytown soil; in similar landform positions
- Pigeonroost soils, which are moderately deep to soft bedrock; in landform positions similar to those of the Edneytown soil
- Areas with stony surfaces in landform positions similar to those of the Edneytown soil
- Rock outcrops in landform positions similar to those of the Edneytown soil

Similar components:
- Hayesville soils, which have more clay in the subsoil than the Edneytown soil; in similar landform positions
- Edneyville soils, which have less clay in the subsoil than the Edneytown soil; in similar landform positions
- Tate soils, which have a thicker solum than the Edneytown soil; on footslopes, toeslopes, and lower backslopes
- Soils that have a red subsoil; in landform positions similar to those of the Edneytown soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Properties and Qualities of the Edneytown Soil

Available water capacity: Moderate (about 7.2 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from gneiss, granite, and/or schist

Use and Management Considerations for Areas of Native Soil

Building sites

- The slope influences the use of machinery and the amount of excavation required.

- The high content of sand or gravel in the soil increases sloughing and causes cutbanks to be more susceptible to caving.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Edneytown—3e; Urban land—8
Virginia soil management group: Edneytown—L; Urban land—none assigned
Hydric soils: Edneytown—no; Urban land—not rated

23C—Edneyville loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

Edneyville soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsurface layer:
5 to 11 inches—yellowish brown loam

Subsoil:
11 to 34 inches—yellowish brown sandy loam

Substratum:
34 to 62 inches—brownish yellow sandy loam

Minor Components

Dissimilar components:
- Edneyville soils that have cobbly surface horizons
- Pigeonroost soils, which are moderately deep to soft bedrock and have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Hayesville soils, which have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil than the Edneyville soil; in similar landform positions
- Areas with stony surfaces in landform positions similar to those of the Edneyville soil
- Rock outcrops in landform positions similar to those of the Edneyville soil

Similar components:
- Edneytown soils, which have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Tate soils, which have a thicker solum than the Edneyville soil; on footslopes, toeslopes, and lower backslopes
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Residuum weathered from gneiss, schist, and/or granite

Use and Management Considerations

Cropland

Suitability: Moderately suited to grass-legume hay; poorly suited to corn; not suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine; moderately suited to northern red oak
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: GG
Hydric soil: No

23D—Edneyville loam, 15 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Edneyville soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsurface layer:
5 to 11 inches—yellowish brown loam

Subsoil:
11 to 34 inches—yellowish brown sandy loam

Substratum:
34 to 62 inches—brownish yellow sandy loam

Minor Components

Dissimilar components:
- Pigeonroost soils, which are moderately deep to soft bedrock and have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Hayesville soils, which have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil than the Edneyville soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Edneyville soil

Similar components:
- Edneyville soils that have cobbly or stony surfaces
- Edneytown soils, which have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Tate soils, which have a thicker solum than the Edneyville soil; on footslopes, toeslopes, and lower backslopes

- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from gneiss, schist, and/or granite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine; moderately suited to northern red oak
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: GG
Hydric soil: No

23E—Edneyville loam, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Edneyville soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsurface layer:
5 to 11 inches—yellowish brown loam

Subsoil:
11 to 34 inches—yellowish brown sandy loam

Substratum:
34 to 62 inches—brownish yellow sandy loam

Minor Components

Dissimilar components:
- Pigeonroost soils, which are moderately deep to soft bedrock and have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Hayesville soils, which have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil than the Edneyville soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Edneyville soil

Similar components:
- Edneyville soils that have cobbly or stony surfaces
- Edneytown soils, which have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Tate soils, which have a thicker solum than the Edneyville soil; on footslopes, toeslopes, and lower backslopes
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)

Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from gneiss, schist, and/or granite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine; moderately suited to northern red oak
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- South to southwest aspects on steep slopes become droughty and require additional management measures.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: GG
Hydric soil: No

24D—Edneyville loam, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Edneyville soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsurface layer:
5 to 11 inches—yellowish brown loam

Subsoil:
11 to 34 inches—yellowish brown sandy loam

Substratum:
34 to 62 inches—brownish yellow sandy loam

Minor Components

Dissimilar components:
- Pigeonroost soils, which are moderately deep to soft bedrock and have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Hayesville soils, which have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil than the Edneyville soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Edneyville soil

Similar components:
- Edneyville soils that have fewer stones or cobbles on the surface
- Edneytown soils, which have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Tate soils, which have a thicker solum than the Edneyville soil; on footslopes, toeslopes, and lower backslopes
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low

Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Residuum weathered from gneiss, schist, and/or granite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine; moderately suited to northern red oak

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: GG
Hydric soil: No

24E—Edneyville loam, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Edneyville soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsurface layer:
5 to 11 inches—yellowish brown loam

Subsoil:
11 to 34 inches—yellowish brown sandy loam

Substratum:
34 to 62 inches—brownish yellow sandy loam

Minor Components

Dissimilar components:
- Pigeonroost soils, which are moderately deep to soft bedrock and have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Hayesville soils, which have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil than the Edneyville soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Edneyville soil

Similar components:
- Edneyville soils that have fewer stones or cobbles on the surface
- Edneytown soils, which have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Tate soils, which have a solum that is thicker than that of the Edneyville soil; on footslopes, toeslopes, and lower backslopes
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Residuum weathered from gneiss, schist, and/or granite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine; moderately suited to northern red oak

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: GG
Hydric soil: No

24F—Edneyville loam, 55 to 80 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and very steep shoulders and summits
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Edneyville soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsurface layer:
5 to 11 inches—yellowish brown loam

Subsoil:
11 to 34 inches—yellowish brown sandy loam

Substratum:
34 to 62 inches—brownish yellow sandy loam

Minor Components

Dissimilar components:
- Pigeonroost soils, which are moderately deep to soft bedrock and have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Hayesville soils, which have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil than the Edneyville soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Edneyville soil

Similar components:
- Edneyville soils that have fewer stones or cobbles on the surface
- Edneytown soils, which have more clay in the subsoil than the Edneyville soil; in similar landform positions
- Tate soils, which have a thicker solum than the Edneyville soil; on footslopes, toeslopes, and lower backslopes
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Residuum weathered from gneiss, schist, and/or granite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine; moderately suited to northern red oak
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber

harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- South to southwest aspects on steep slopes become droughty and require additional management measures.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: GG
Hydric soil: No

25B—Elsinboro fine sandy loam, 2 to 7 percent slopes, rarely flooded

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Stream terraces in valleys (fig. 6)
Position on the landform: Treads
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Elsinboro soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 10 inches—dark yellowish brown fine sandy loam

Subsurface layer:
10 to 18 inches—brown fine sandy loam

Subsoil:
18 to 45 inches—strong brown clay loam

Figure 6.—Gently sloping terraces along the New River are in the foreground. Elsinboro fine sandy loam, 2 to 7 percent slopes, rarely flooded, occurs on the terrace; Peaks very gravelly loam, 55 to 80 percent slopes, extremely stony, is in the woodland in the background on the ridge.

Substratum:
45 to 62 inches—strong brown cobbly sandy loam

Minor Components

Dissimilar components:
- Elsinboro soils that have cobbly surface horizons
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil than the Elsinboro soil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil than the Elsinboro soil; on flood plains
- Craigsville soils, which have more rock fragments and less clay in the subsoil than the Elsinboro soil; on flood plains
- Kinkora soils, which are poorly drained and have more clay in the subsoil than the Elsinboro soil; in similar landform positions
- Areas with stony surfaces in landform positions similar to those of the Elsinboro soil

Similar components:
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Elsinboro soil
- Comus soils, which have more sand and less clay in the subsoil than the Elsinboro soil; on flood plains
- Tate soils on footslopes, toeslopes, and lower backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 7.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)

Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Alluvium derived from igneous rock and/or metamorphic rock

Use and Management Considerations

Cropland

Suitability: Well suited to corn and grass-legume hay; moderately suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.
- This soil is well suited to haul roads and log landings and to equipment operations.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas.

Building sites

- Flooding is a limitation affecting building site development.

Septic tank absorption fields

- Because the excessive permeability limits the proper treatment of the effluent from conventional septic systems, the water table may become polluted.

Local roads and streets

- The low soil strength is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: All areas are prime farmland
Land capability class: 2e
Virginia soil management group: L
Hydric soil: No

Figure 7.—An area of Elsinboro-Urban land complex, 0 to 7 percent slopes, rarely flooded, on a terrace near Galax. Flooding is a limiting feature in areas of this map unit.

26B—Elsinboro-Urban land complex, 0 to 7 percent slopes, rarely flooded

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Stream terraces in valleys (fig. 7)
Position on the landform: Treads
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

Elsinboro soil and similar inclusions: Typically 60 percent, ranging from about 55 to 65 percent
Urban land: Typically 35 percent, ranging from about 30 to 35 percent

Typical Profile

Elsinboro

Surface layer:
0 to 10 inches—dark yellowish brown fine sandy loam

Subsurface layer:
10 to 18 inches—brown fine sandy loam

Subsoil:
18 to 45 inches—strong brown clay loam

Substratum:
45 to 62 inches—strong brown cobbly sandy loam

Urban land

Urban land consists of areas covered by highways, streets, parking lots, buildings, and other impervious surfaces.

Minor Components

Dissimilar components:
- Elsinboro soils that have cobbly surface horizons
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil than the Elsinboro soil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil than the Elsinboro soil; on flood plains
- Craigsville soils, which have more rock fragments and less clay in the subsoil than the Elsinboro soil; on flood plains
- Kinkora soils, which are poorly drained and have more clay in the subsoil than the Elsinboro soil; in similar landform positions
- Areas with stony surfaces in landform positions similar to those of the Elsinboro soil

Similar components:
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Elsinboro soil
- Comus soils, which have more sand and less clay in the subsoil than the Elsinboro soil; on flood plains
- Tate soils on footslopes, toeslopes, and lower backslopes

Properties and Qualities of the Elsinboro Soil

Available water capacity: Moderate (about 7.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: Rare
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: None
Parent material: Alluvium derived from igneous rock and/or metamorphic rock

Use and Management Considerations for Areas of Native Soil

Building sites

- Flooding is a limitation affecting building site development.

Septic tank absorption fields

- Because the excessive permeability limits the proper treatment of the effluent from conventional septic systems, the water table may become polluted.

Local roads and streets

- The low soil strength is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Not prime farmland

Land capability class: Elsinboro—2e; Urban land—8
Virginia soil management group: Elsinboro—L; Urban land—none assigned
Hydric soils: Elsinboro—no; Urban land—not rated

27D—Evard-Cowee complex, 15 to 25 percent slopes, stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: About 5 to 10 acres
Shape of areas: Banded and elongated

Map Unit Composition

Evard soil and similar inclusions: Typically 50 percent, ranging from about 45 to 55 percent
Cowee soil and similar inclusions: Typically 35 percent, ranging from about 30 to 40 percent

Typical Profile

Evard

Surface layer:
0 to 5 inches—dark yellowish brown gravelly fine sandy loam

Subsurface layer:
5 to 8 inches—yellowish brown gravelly fine sandy loam

Subsoil:
8 to 13 inches—yellowish red sandy clay loam
13 to 29 inches—red clay loam
29 to 35 inches—yellowish red sandy clay loam

Substratum:
35 to 45 inches—strong brown loamy fine sand
45 to 55 inches—yellowish red channery fine sandy loam
55 to 60 inches—yellowish brown channery loamy fine sand

Cowee

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 6 inches—brown gravelly loam

Subsoil:
6 to 27 inches—yellowish red gravelly clay loam

Substratum:
27 to 39 inches—multicolored gravelly sandy loam

Soft bedrock:
39 to 45 inches—bedrock

Minor Components

Dissimilar components:
- Rock outcrops in landform positions similar to those of the Evard and Cowee soils

Similar components:
- Hayesville soils, which are very deep to bedrock and have more clay in the subsoil than the Evard soil; in similar landform positions
- Chestnut soils, which are moderately deep to soft bedrock and have less clay in the subsoil than the Cowee soil; on convex summits, shoulders, and backslopes
- Soils that have a yellower subsoil than the Cowee soil; in similar landform positions
- Soils that have more clay in the subsoil than the Cowee soil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Evard—moderate (about 8.6 inches); Cowee—low (about 3.4 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Evard—very deep (more than 60 inches); Cowee—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Evard—more than 60 inches; Cowee—20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Evard—high; Cowee—very high
Surface fragments: About 0.01 to 0.10 percent subangular stones
Parent material: Evard—creep deposits over residuum weathered from schist and/or gneiss; Cowee—residuum weathered from schist and/or gneiss

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

Suitability: Moderately suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- Rock fragments on the surface may restrict the operation of farm machinery.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to southern red oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.

- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6s
Virginia soil management group: Evard—L; Cowee—N
Hydric soils: No

28B—Glenelg loam, 2 to 7 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits
Size of areas: 5 to 75 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—dark grayish brown loam

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Minor Components

Dissimilar components:
- Glenelg soils that have cobbly surface horizons
- Cowee soils, which are moderately deep to soft bedrock; in landform positions similar to those of the Glenelg soil
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil than the Glenelg soil; in similar landform positions
- Areas with stony surfaces in landform positions similar to those of the Glenelg soil
- Rock outcrops in landform positions similar to those of the Glenelg soil

Similar components:
- Hayesville soils, which have more clay in the subsoil than the Glenelg soil; in similar landform positions
- Tate soils, which have a solum that is thicker than that of the Glenelg soil; on footslopes, toeslopes, and lower backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations

Cropland

Suitability: Well suited to corn and grass-legume hay; moderately suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.

- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- This soil is well suited to building sites.

Septic tank absorption fields

- This soil is well suited to septic tank absorption fields.

Local roads and streets

- This soil is well suited to local roads and streets.

Interpretive Groups

Prime farmland: All areas are prime farmland
Land capability class: 2e
Virginia soil management group: N
Hydric soil: No

28C—Glenelg loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—dark grayish brown loam

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Minor Components

Dissimilar components:
- Glenelg soils that have cobbly surface horizons
- Cowee soils, which are moderately deep to soft bedrock; in landform positions similar to those of the Glenelg soil
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil than the Glenelg soil; in similar landform positions

- Rock outcrops in landform positions similar to those of the Glenelg soil
- Areas with stony surfaces

Similar components:
- Hayesville soils, which have more clay in the subsoil than the Glenelg soil; in similar landform positions
- Tate soils, which have a thicker solum than the Glenelg soil; on footslopes, toeslopes, and lower backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations

Cropland

Suitability: Well suited to grass-legume hay; moderately suited to corn and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: N
Hydric soil: No

28D—Glenelg loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 450 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—dark grayish brown loam

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Minor Components

Dissimilar components:
- Cowee soils, which are moderately deep to soft bedrock; in landform positions similar to those of the Glenelg soil
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil than the Glenelg soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Glenelg soil

Similar components:
- Glenelg soils that have cobbly or stony surfaces
- Hayesville soils, which have more clay in the subsoil than the Glenelg soil; in similar landform positions
- Tate soils, which have a solum that is thicker than that of the Glenelg soil; on footslopes, toeslopes, and lower backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)

Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations

Cropland

Suitability: Moderately suited to corn, grass-legume hay, and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland

Land capability class: 4e
Virginia soil management group: N
Hydric soil: No

28E—Glenelg loam, 25 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—dark grayish brown loam

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Minor Components

Dissimilar components:
- Cowee soils, which are moderately deep to soft bedrock; in landform positions similar to those of the Glenelg soil
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil than the Glenelg soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Glenelg soil

Similar components:
- Glenelg soils that have cobbly or stony surfaces
- Hayesville soils, which have more clay in the subsoil than the Glenelg soil; in similar landform positions
- Tate soils, which have a thicker solum than the Glenelg soil; on footslopes, toeslopes, and lower backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High

Surface fragments: None
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: N
Hydric soil: No

28F—Glenelg loam, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)

Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and very steep shoulders and summits
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—dark grayish brown loam

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Minor Components

Dissimilar components:
- Cowee soils, which are moderately deep to soft bedrock; in landform positions similar to those of the Glenelg soil
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil than the Glenelg soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Glenelg soil

Similar components:
- Glenelg soils that have cobbly or stony surfaces
- Hayesville soils, which have more clay in the subsoil than the Glenelg soil; in similar landform positions
- Tate soils, which have a thicker solum than the Glenelg soil; on footslopes, toeslopes, and lower backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: N
Hydric soil: No

29C—Glenelg gravelly loam, 7 to 15 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—dark grayish brown gravelly loam

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Minor Components

Dissimilar components:
- Cowee soils, which are moderately deep to soft bedrock; in landform positions similar to those of the Glenelg soil
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments and less clay in the subsoil than the Glenelg soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Glenelg soil

Similar components:
- Glenelg soils that have fewer stones or cobbles on the surface
- Hayesville soils, which have more clay in the subsoil than the Glenelg soil; in similar landform positions
- Tate soils, which have a solum that is thicker than that of the Glenelg soil; on footslopes, toeslopes, and lower backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- Large stones on the surface may restrict the operation of some farm machinery.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6s
Virginia soil management group: N
Hydric soil: No

29D—Glenelg gravelly loam, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—dark grayish brown gravelly loam

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Minor Components

Dissimilar components:
- Cowee soils, which are moderately deep to soft bedrock; in landform positions similar to those of the Glenelg soil
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments and less clay in the subsoil than the Glenelg soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Glenelg soil

Similar components:
- Glenelg soils that have fewer stones or cobbles on the surface
- Hayesville soils, which have more clay in the subsoil than the Glenelg soil; in similar landform positions
- Tate soils, which have a solum that is thicker than that of the Glenelg soil; on footslopes, toeslopes, and lower backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: N
Hydric soil: No

29E—Glenelg gravelly loam, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—dark grayish brown gravelly loam

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Minor Components

Dissimilar components:
- Cowee soils, which are moderately deep to soft bedrock; in landform positions similar to those of the Glenelg soil
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments and less clay in the subsoil than the Glenelg soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Glenelg soil

Similar components:
- Glenelg soils that have fewer stones or cobbles on the surface
- Hayesville soils, which have more clay in the subsoil than the Glenelg soil; in similar landform positions
- Tate soils, which have a thicker solum than the Glenelg soil; on footslopes, toeslopes, and lower backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)

Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to eastern white pine; moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: N
Hydric soil: No

30C—Glenelg-Urban land complex, 0 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 425 acres
Shape of areas: Irregular

Map Unit Composition

Glenelg soil and similar inclusions: Typically 60 percent, ranging from about 55 to 65 percent
Urban land: Typically 35 percent, ranging from about 30 to 35 percent

Typical Profile

Glenelg

Surface layer:
0 to 4 inches—dark grayish brown loam

Subsoil:
4 to 24 inches—strong brown clay loam

Substratum:
24 to 45 inches—yellowish brown fine sandy loam
45 to 62 inches—dark yellowish brown fine sandy loam

Urban land

Urban land consists of areas covered by highways, streets, parking lots, buildings, and other impervious surfaces.

Minor Components

Dissimilar components:
- Glenelg soils that have cobbly surface horizons
- Cowee soils, which are moderately deep to soft bedrock; in landform positions similar to those of the Glenelg soil
- Rock outcrops in landform positions similar to those of the Glenelg soil
- Areas with stony surfaces in landform positions similar to those of the Glenelg soil

Similar components:
- Hayesville soils, which have more clay in the subsoil than the Glenelg soil; in similar landform positions
- Tate soils, which have a thicker solum than the Glenelg soil; on footslopes, toeslopes, and lower backslopes

Properties and Qualities of the Glenelg Soil

Available water capacity: Moderate (about 8.0 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low

Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from mica schist and/or mica gneiss

Use and Management Considerations for Areas of Native Soil

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Glenelg—3e; Urban land—8
Virginia soil management group: Glenelg—N; Urban land—none assigned
Hydric soils: Glenelg—no; Urban land—not rated

31D—Greenlee very cobbly loam, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes, toeslopes, and lower backslopes
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Greenlee soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 7 inches—dark brown very cobbly loam

Subsurface layer:
7 to 14 inches—dark yellowish brown very cobbly sandy loam

Subsoil:
14 to 53 inches—yellowish brown very cobbly sandy loam

Substratum:
53 to 62 inches—yellowish brown extremely cobbly sandy loam

Minor Components

Dissimilar components:
- Areas with rubbly surfaces in landform positions similar to those of the Greenlee soil

Similar components:
- Greenlee soils that have fewer stones or cobbles on the surface
- Greenlee soils that have bouldery surfaces
- Cullasaja soils, which have a dark surface layer that is thicker than that of the Greenlee soil; on north-facing footslopes and lower backslopes
- Tate soils, which have fewer rock fragments and more clay in the subsoil than the Greenlee soil; in similar landform positions
- Thunder soils, which have more clay in the subsoil than the Greenlee soil and a thicker dark surface layer; in similar landform positions

Soil Properties and Qualities

Available water capacity: Low (about 5.5 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Colluvium and/or local alluvium derived from metamorphic rock and/or igneous rock

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

Suitability: Well suited

- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of rock fragments, excavation is difficult and cutbanks are unstable.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: CC
Hydric soil: No

31E—Greenlee very cobbly loam, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes and lower backslopes
Size of areas: 5 to 75 acres
Shape of areas: Irregular

Map Unit Composition

Greenlee soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 7 inches—dark brown very cobbly loam

Subsurface layer:
7 to 14 inches—dark yellowish brown very cobbly sandy loam

Subsoil:
14 to 53 inches—yellowish brown very cobbly sandy loam

Substratum:
53 to 62 inches—yellowish brown extremely cobbly sandy loam

Minor Components

Dissimilar components:
- Areas with rubbly surfaces in landform positions similar to those of the Greenlee soil

Similar components:
- Greenlee soils that have fewer stones or cobbles on the surface

- Greenlee soils that have bouldery surfaces
- Cullasaja soils, which have a dark surface layer that is thicker than that of the Greenlee soil; on north-facing footslopes and lower backslopes
- Tate soils, which have fewer rock fragments and more clay in the subsoil than the Greenlee soil; in similar landform positions
- Thunder soils, which have more clay in the subsoil than the Greenlee soil and a thicker dark surface layer; in similar landform positions

Soil Properties and Qualities

Available water capacity: Low (about 5.5 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Colluvium and/or local alluvium derived from metamorphic rock and/or igneous rock

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of rock fragments, excavation is difficult and cutbanks are unstable.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: CC
Hydric soil: No

32A—Hatboro sandy loam, 0 to 3 percent slopes, frequently flooded

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Flood plains in valleys
Position on the landform: Steps and channels; many areas are backswamps or depressions
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

Hatboro soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 8 inches—brown sandy loam; yellowish brown masses of oxidized iron

Subsoil:
8 to 28 inches—light brownish gray sandy clay loam; yellowish brown masses of oxidized iron
28 to 45 inches—grayish brown sandy clay loam; strong brown masses of oxidized iron

Substratum:
45 to 62 inches—grayish brown silt loam; strong brown masses of oxidized iron

Minor Components

Dissimilar components:
- Elsinboro soils, which are well drained and have more clay in the subsoil than the Hatboro soil; on treads
- Delanco soils, which are moderately well drained and have more clay in the subsoil than the Hatboro soil; on treads, footslopes, and toeslopes
- Craigsville soils, which are well drained and have more rock fragments in the subsoil than the Hatboro soil; in similar landform positions
- Kinkora soils, which have more clay in the subsoil than the Hatboro soil; on treads

Similar components:
- Codorus soils, which are somewhat poorly drained; in landform positions similar to those of the Hatboro soil
- Hatboro soils that have cobbly or stony surfaces
- Soils that have a dark surface layer; in landform positions similar to those of the Hatboro soil

Soil Properties and Qualities

Available water capacity: High (about 9.3 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Poorly drained
Depth to seasonal water saturation: About 0 to 6 inches
Water table kind: Apparent
Flooding hazard: Frequent
Ponding hazard: Frequent
Depth of ponding: 0.1 to 0.5 foot
Shrink-swell potential: Low
Runoff class: Negligible
Surface fragments: None
Parent material: Alluvium derived from igneous rock and/or metamorphic rock

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Poorly suited
- Flooding may damage pastures.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.
- Frost action may damage the root systems of plants.

Woodland

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should focus on streamside management zones and stream crossings and should include general adherence to all applicable best management practices.
- Flooding may damage haul roads.
- Flooding and ponding restrict the safe use of roads by log trucks.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- Flooding and ponding are limitations affecting building site development.
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields

- Flooding and ponding are limitations affecting septic tank absorption fields.

Figure 8.—Cabbage growing on Hayesville loam, 2 to 7 percent slopes, in a foothill area.

- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Flooding may damage local roads and streets.
- Ponding affects the ease of excavation and grading and limits the bearing capacity of the soil.
- The low soil strength may cause structural damage to local roads and streets.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6w
Virginia soil management group: HH
Hydric soil: Yes

33B—Hayesville loam, 2 to 7 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and hills on low mountains and foothills (fig. 8)
Position on the landform: Summits
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Hayesville soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsurface layer:
6 to 11 inches—strong brown loam

Subsoil:
11 to 43 inches—red clay
43 to 49 inches—red clay loam

Substratum:
49 to 62 inches—red sandy loam

Minor Components

Dissimilar components:
- Hayesville soils that have cobbly surface horizons
- Cowee and Pigeonroost soils, which are moderately deep to soft bedrock and have less clay in the subsoil than the Hayesville soil; in similar landform positions
- Areas with stony surfaces in landform positions similar to those of the Hayesville soil
- Rock outcrops in landform positions similar to those of the Hayesville soil

Similar components:
- Braddock soils on risers, treads, footslopes, toeslopes, and lower backslopes
- Edneytown and Glenelg soils, which have less clay in the subsoil than the Hayesville soil; in similar landform positions
- Tate soils, which have less clay in the subsoil than the Hayesville soil; on footslopes, toeslopes, and lower backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

Suitability: Well suited to grass-legume hay; moderately suited to corn and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The high clay content restricts the rooting depth of crops.
- Soil crusting results in a decrease in water infiltration and hinders the emergence of seedlings.

Pastureland

Suitability: Well suited

- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings.
- This soil is well suited to equipment operations.

Christmas trees

Suitability: Well suited
- The high clay content increases disease problems, especially phytophthora.

Building sites

- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields

- Because the excessive permeability limits the proper treatment of the effluent from conventional septic systems, the water table may become polluted.

Local roads and streets

- The low soil strength may cause structural damage to local roads and streets.

Interpretive Groups

Prime farmland: All areas are prime farmland
Land capability class: 2e
Virginia soil management group: X
Hydric soil: No

33C—Hayesville loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and hills on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Hayesville soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsurface layer:
6 to 11 inches—strong brown loam

Subsoil:
11 to 43 inches—red clay
43 to 49 inches—red clay loam

Substratum:
49 to 62 inches—red sandy loam

Minor Components

Dissimilar components:
- Hayesville soils that have cobbly surface horizons
- Cowee and Pigeonroost soils, which are moderately deep to soft bedrock and have less clay in the subsoil than the Hayesville soil; in similar landform positions
- Areas with stony surfaces in landform positions similar to those of the Hayesville soil
- Rock outcrops in landform positions similar to those of the Hayesville soil

Similar components:
- Braddock soils on risers, treads, footslopes, toeslopes, and lower backslopes
- Edneytown and Glenelg soils, which have less clay in the subsoil than the Hayesville soil; in similar landform positions
- Tate soils, which have less clay in the subsoil than the Hayesville soil; on footslopes, toeslopes, and lower backslopes

Soil Properties and Qualities

Available water capacity: Moderate (about 8.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

Suitability: Moderately suited to corn, grass-legume hay, and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The high clay content restricts the rooting depth of crops.
- Soil crusting results in a decrease in water infiltration and hinders the emergence of seedlings.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative

impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- The high clay content increases disease problems, especially phytophthora.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: X
Hydric soil: No

33D—Hayesville loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and hills on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

Hayesville soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 6 inches—brown loam

Subsurface layer:
6 to 11 inches—strong brown loam

Subsoil:
11 to 43 inches—red clay
43 to 49 inches—red clay loam

Substratum:
49 to 62 inches—red sandy loam

Minor Components

Dissimilar components:
- Cowee and Pigeonroost soils, which are moderately deep to soft bedrock and have less clay in the subsoil than the Hayesville soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the Hayesville soil

Similar components:
- Hayesville soils that have cobbly or stony surfaces
- Braddock soils on risers, treads, footslopes, toeslopes, and lower backslopes
- Edneytown and Glenelg soils, which have less clay in the subsoil than the Hayesville soil; in similar landform positions
- Tate soils, which have less clay in the subsoil than the Hayesville soil; on footslopes, toeslopes, and lower backslopes
- Steeper areas of Hayesville soils

Soil Properties and Qualities

Available water capacity: Moderate (about 8.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from gneiss and/or schist

Use and Management Considerations

Cropland

Suitability: Moderately suited to grass-legume hay and alfalfa hay; poorly suited to corn
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The high clay content restricts the rooting depth of crops.
- Soil crusting results in a decrease in water infiltration and hinders the emergence of seedlings.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.

- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- The high clay content increases disease problems, especially phytophthora.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- The high content of clay in the subsurface layer increases the difficulty of digging, filling, and compacting the soil material in shallow excavations.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4e
Virginia soil management group: X
Hydric soil: No

34B—Keener loam, 2 to 7 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves and benches on low mountains and foothills
Position on the landform: Footslopes and toeslopes
Size of areas: 5 to 85 acres
Shape of areas: Irregular

Map Unit Composition

Keener soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsoil:
5 to 14 inches—yellowish brown loam
14 to 32 inches—yellowish brown clay loam
32 to 54 inches—strong brown clay loam
54 to 62 inches—strong brown gravelly sandy clay loam

Minor Components

Dissimilar components:
- Keener soils that have cobbly surface horizons
- Sylvatus and Unicoi soils, which are shallow to hard bedrock and have less clay and more rock fragments in the subsoil than the Keener soil; on summits, shoulders, and upper backslopes
- Sylco soils, which are moderately deep to hard bedrock and have less clay and more rock fragments in the subsoil than the Keener soil; on summits, shoulders, and upper backslopes
- McCamy soils, which are moderately deep to hard bedrock; on summits, shoulders, and backslopes
- Areas with stony surfaces in landform positions similar to those of the Keener soil

Similar components:
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Keener soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Colluvium derived from metasandstone and/or quartzite

Use and Management Considerations

Cropland

Suitability: Well suited to corn and grass-legume hay; moderately suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Moderately suited to northern red oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings.
- This soil is well suited to equipment operations.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- This soil is well suited to building sites.

Septic tank absorption fields

- Because the excessive permeability limits the proper treatment of the effluent from conventional septic systems, the water table may become polluted.

Local roads and streets

- The low soil strength may cause structural damage to local roads and streets.

Interpretive Groups

Prime farmland: All areas are prime farmland
Land capability class: 2e
Virginia soil management group: O
Hydric soil: No

34C—Keener loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves and benches on low mountains and foothills
Position on the landform: Footslopes and toeslopes
Size of areas: 5 to 85 acres
Shape of areas: Irregular

Map Unit Composition

Keener soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsoil:
5 to 14 inches—yellowish brown loam
14 to 32 inches—yellowish brown clay loam
32 to 54 inches—strong brown clay loam
54 to 62 inches—strong brown gravelly sandy clay loam

Minor Components

Dissimilar components:
- Keener soils that have cobbly surface horizons
- Sylvatus and Unicoi soils, which are shallow to hard bedrock and have less clay and more rock fragments in the subsoil than the Keener soil; on summits, shoulders, and upper backslopes
- Sylco soils, which are moderately deep to hard bedrock and have less clay and more rock fragments in the subsoil than the Keener soil; on summits, shoulders, and upper backslopes

- McCamy soils, which are moderately deep to hard bedrock; on summits, shoulders, and backslopes
- Areas with stony surfaces in landform positions similar to those of the Keener soil

Similar components:
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Keener soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Colluvium derived from metasandstone and/or quartzite

Use and Management Considerations

Cropland

Suitability: Well suited to grass-legume hay; moderately suited to corn and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Moderately suited to northern red oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: O
Hydric soil: No

34D—Keener loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves and benches on low mountains and foothills
Position on the landform: Footslopes, toeslopes, and lower backslopes
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

Keener soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsoil:
5 to 14 inches—yellowish brown loam
14 to 32 inches—yellowish brown clay loam
32 to 54 inches—strong brown clay loam
54 to 62 inches—strong brown gravelly sandy clay loam

Minor Components

Dissimilar components:
- Sylvatus and Unicoi soils, which are shallow to hard bedrock and have less clay and more rock fragments in the subsoil than the Keener soil; on summits, shoulders, and upper backslopes
- Sylco soils, which are moderately deep to hard bedrock and have less clay and more rock fragments in the subsoil than the Keener soil; on summits, shoulders, and upper backslopes
- McCamy soils, which are moderately deep to hard bedrock; on summits, shoulders, and backslopes

Similar components:
- Keener soils that have cobbly or stony surfaces
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Keener soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)

Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Colluvium derived from metasandstone and/or quartzite

Use and Management Considerations

Cropland

Suitability: Moderately suited to corn, grass-legume hay, and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Moderately suited to northern red oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4e

Virginia soil management group: O
Hydric soil: No

35C—Keener loam, 7 to 15 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves and benches on low mountains and foothills
Position on the landform: Footslopes and toeslopes
Size of areas: 5 to 120 acres
Shape of areas: Irregular

Map Unit Composition

Keener soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsoil:
5 to 14 inches—yellowish brown loam
14 to 32 inches—yellowish brown clay loam
32 to 54 inches—strong brown clay loam
54 to 62 inches—strong brown gravelly sandy clay loam

Minor Components

Dissimilar components:
- Sylvatus and Unicoi soils, which are shallow to hard bedrock and have less clay and more rock fragments in the subsoil than the Keener soil; on summits, shoulders, and upper backslopes
- Sylco soils, which are moderately deep to hard bedrock and have less clay and more rock fragments in the subsoil than the Keener soil; on summits, shoulders, and upper backslopes
- McCamy soils, which are moderately deep to hard bedrock; on summits, shoulders, and backslopes
- Areas with rubbly surfaces in landform positions similar to those of the Keener soil

Similar components:
- Keener soils that have fewer stones or cobbles on the surface
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Keener soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium

Surface fragments: About 0.10 to 3.00 percent subrounded stones
Parent material: Colluvium derived from metasandstone and/or quartzite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- Large stones on the surface may restrict the operation of some farm machinery.

Woodland

Suitability: Moderately suited to northern red oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6s
Virginia soil management group: O
Hydric soil: No

35D—Keener loam, 15 to 35 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves and benches on low mountains and foothills
Position on the landform: Footslopes, toeslopes, and lower backslopes
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Keener soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsoil:
5 to 14 inches—yellowish brown loam
14 to 32 inches—yellowish brown clay loam
32 to 54 inches—strong brown clay loam
54 to 62 inches—strong brown gravelly sandy clay loam

Minor Components

Dissimilar components:
- Sylvatus and Unicoi soils, which are shallow to hard bedrock and have less clay and more rock fragments in the subsoil than the Keener soil; on summits, shoulders, and upper backslopes
- Sylco soils, which are moderately deep to hard bedrock and have less clay and more rock fragments in the subsoil than the Keener soil; on summits, shoulders, and upper backslopes
- McCamy soils, which are moderately deep to hard bedrock; on summits, shoulders, and backslopes
- Areas with rubbly surfaces in landform positions similar to those of the Keener soil

Similar components:
- Keener soils that have fewer stones or cobbles on the surface
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Keener soil

Soil Properties and Qualities

Available water capacity: Moderate (about 7.5 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.10 to 3.00 percent subrounded stones
Parent material: Colluvium derived from metasandstone and/or quartzite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak and yellow-poplar

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Planting should be avoided in seeps, low-lying areas, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: O
Hydric soil: No

36A—Kinkora fine sandy loam, 0 to 3 percent slopes, rarely flooded

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Stream terraces in valleys
Position on the landform: Depressions or backswamps on treads
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Kinkora soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 7 inches—dark grayish brown fine sandy loam; light brownish gray iron depletions

Subsurface layer:
7 to 16 inches—dark grayish brown fine sandy loam; yellowish brown masses of oxidized iron

Subsoil:
16 to 38 inches—grayish brown clay loam; yellowish brown masses of oxidized iron

Substratum:
38 to 48 inches—gray gravelly loam
48 to 62 inches—gray gravelly loamy sand

Minor Components

Dissimilar components:
- Elsinboro soils, which are well drained; in landform positions similar to those of the Kinkora soil
- Delanco soils, which are moderately well drained and have less clay in the subsoil than the Kinkora soil; in similar landform positions
- Craigsville soils, which are well drained and have more rock fragments in the subsoil than the Kinkora soil; on flood plains
- Comus soils, which are well drained and have less clay in the subsoil than the Kinkora soil; on flood plains

Similar components:
- Kinkora soils that have cobbly or stony surfaces
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil than the Kinkora soil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil than the Kinkora soil; on flood plains

Soil Properties and Qualities

Available water capacity: Moderate (about 7.6 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Poorly drained
Depth to seasonal water saturation: About 0 to 6 inches
Water table kind: Apparent
Flooding hazard: Rare
Ponding hazard: Occasional
Depth of ponding: 0.1 to 0.5 foot
Shrink-swell potential: High
Runoff class: Negligible
Surface fragments: None
Parent material: Alluvium derived from metamorphic rock and/or igneous rock

Use and Management Considerations

Cropland

Suitability: Poorly suited to corn; not suited to grass-legume hay and alfalfa hay
- The high clay content restricts the rooting depth of crops.
- Frost action may damage the root system of winter grain crops.
- The seasonal high water table restricts equipment operation, decreases the viability of crops, and interferes with the planting and harvesting of crops.

Pastureland

Suitability: Poorly suited
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.
- Frost action may damage the root systems of plants.

Woodland

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- Ponding restricts the safe use of roads by log trucks.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- Flooding and ponding are limitations affecting building site development.
- The seasonal high water table may restrict the period when excavations can be made.

Septic tank absorption fields

- Ponding is a limitation affecting septic tank absorption fields.
- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets

- Ponding affects the ease of excavation and grading and limits the bearing capacity of the soil.
- Because of shrinking and swelling, the use of this soil as base material for local roads and streets is restricted.
- The low soil strength is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4w
Virginia soil management group: OO
Hydric soil: Yes

37C—Konnarock channery silt loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

Konnarock soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—dark brown channery silt loam

Subsoil:
4 to 19 inches—brown very channery silt loam

Substratum:
19 to 23 inches—brown extremely channery silt loam

Hard bedrock:
23 inches—bedrock

Minor Components

Dissimilar components:
- McCamy and Pigeonroost soils, which have fewer rock fragments and more clay in the subsoil than the Konnarock soil; in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Konnarock soil; on footslopes, toeslopes, and lower backslopes
- Areas with stony surfaces in landform positions similar to those of the Konnarock soil
- Rock outcrops in landform positions similar to those of the Konnarock soil

Similar components:
- Konnarock soils that have cobbly surface horizons
- Soils that are shallow to hard bedrock; in landform positions similar to those of the Konnarock soil

Soil Properties and Qualities

Available water capacity: Very low (about 2.6 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Residuum weathered from rhythmite and tillite

Use and Management Considerations

Cropland

Suitability: Poorly suited to corn and grass-legume hay; not suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The limited available water capacity may cause plants to suffer from moisture stress.

Pastureland

Suitability: Moderately suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Moderately suited to northern red oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.

- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: JJ
Hydric soil: No

37D—Konnarock channery silt loam, 15 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Konnarock soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—dark brown channery silt loam

Subsoil:
4 to 19 inches—brown very channery silt loam

Substratum:
19 to 23 inches—brown extremely channery silt loam

Hard bedrock:
23 inches—bedrock

Minor Components

Dissimilar components:
- McCamy and Pigeonroost soils, which have fewer rock fragments and more clay in the subsoil than the Konnarock soil; in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Konnarock soil; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in landform positions similar to those of the Konnarock soil

Similar components:
- Konnarock soils that have cobbly or stony surfaces
- Soils that are shallow to hard bedrock; in landform positions similar to those of the Konnarock soil

Soil Properties and Qualities

Available water capacity: Very low (about 2.6 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from rhythmite and tillite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Moderately suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Moderately suited to northern red oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.

- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: JJ
Hydric soil: No

37E—Konnarock channery silt loam, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 450 acres
Shape of areas: Irregular

Map Unit Composition

Konnarock soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 4 inches—dark brown channery silt loam

Subsoil:
4 to 19 inches—brown very channery silt loam

Substratum:
19 to 23 inches—brown extremely channery silt loam

Hard bedrock:
23 inches—bedrock

Minor Components

Dissimilar components:
- McCamy and Pigeonroost soils, which have fewer rock fragments and more clay in the subsoil than the Konnarock soil; in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Konnarock soil; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in landform positions similar to those of the Konnarock soil

Similar components:
- Konnarock soils that have cobbly or stony surfaces
- Soils that are shallow to hard bedrock; in landform positions similar to those of the Konnarock soil

Soil Properties and Qualities

Available water capacity: Very low (about 2.6 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from rhythmite and tillite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- South to southwest aspects on steep slopes become droughty and require additional management measures.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: JJ
Hydric soil: No

38C—McCamy fine sandy loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

McCamy soil and similar inclusions: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 5 inches—brown fine sandy loam

Subsoil:
5 to 9 inches—brown fine sandy loam
9 to 23 inches—yellowish red sandy clay loam

Substratum:
23 to 26 inches—yellowish red gravelly sandy loam

Soft bedrock:
26 to 31 inches—bedrock

Hard bedrock:
31 inches—bedrock

Minor Components

Dissimilar components:
- Sylco soils, which have less clay and more rock fragments in the subsoil than the McCamy soil; in similar landform positions
- Keener soils, which are very deep to bedrock; on footslopes and lower backslopes
- Sylvatus and Unicoi soils, which are shallow to hard bedrock and have less clay and more rock fragments in the subsoil than the McCamy soil; in similar landform positions
- Areas with stony surfaces
- Rock outcrops in landform positions similar to those of the McCamy soil

Similar components:
- McCamy soils that have cobbly surface horizons
- Soils that have a yellowish brown subsoil; in landform positions similar to those of the McCamy soil

Soil Properties and Qualities

Available water capacity: Very low (about 2.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from metasandstone and/or phyllite

Use and Management Considerations

Cropland

Suitability: Moderately suited to grass-legume hay; poorly suited to corn; not suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- The limited available water capacity may cause plants to suffer from moisture stress.

Pastureland

Suitability: Moderately suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative

impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: FF
Hydric soil: No

38D—McCamy fine sandy loam, 15 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

McCamy soil and similar inclusions: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 5 inches—brown fine sandy loam

Subsoil:
5 to 9 inches—brown fine sandy loam
9 to 23 inches—yellowish red sandy clay loam

Substratum:
23 to 26 inches—yellowish red gravelly sandy loam

Soft bedrock:
26 to 31 inches—bedrock

Hard bedrock:
31 inches—bedrock

Minor Components

Dissimilar components:
- Sylco soils, which have less clay and more rock fragments in the subsoil than the McCamy soil; in similar landform positions
- Keener soils, which are very deep to bedrock; on footslopes and lower backslopes
- Sylvatus and Unicoi soils, which are shallow to hard bedrock and have less clay and more rock fragments in the subsoil than the McCamy soil; in similar landform positions
- Areas with stony surfaces
- Rock outcrops in landform positions similar to those of the McCamy soil

Similar components:
- McCamy soils that have cobbly surface horizons
- Soils that have a yellowish brown subsoil; in landform positions similar to those of the McCamy soil

Soil Properties and Qualities

Available water capacity: Very low (about 2.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from metasandstone and/or phyllite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Moderately suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: FF
Hydric soil: No

39D—McCamy fine sandy loam, 7 to 35 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

McCamy soil and similar inclusions: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 5 inches—brown fine sandy loam

Subsoil:
5 to 9 inches—brown fine sandy loam
9 to 23 inches—yellowish red sandy clay loam

Substratum:
23 to 26 inches—yellowish red gravelly sandy loam

Soft bedrock:
26 to 31 inches—bedrock

Hard bedrock:
31 inches—bedrock

Minor Components

Dissimilar components:
- Sylco soils, which have less clay and more rock fragments in the subsoil than the McCamy soil; in similar landform positions
- Keener soils, which are very deep to bedrock; on footslopes and lower backslopes
- Sylvatus and Unicoi soils, which are shallow to hard bedrock and have less clay and more rock fragments in the subsoil than the McCamy soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the McCamy soil

Similar components:
- McCamy soils that have fewer stones or cobbles on the surface
- Soils that have a yellowish brown subsoil; in landform positions similar to those of the McCamy soil

Soil Properties and Qualities

Available water capacity: Very low (about 2.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.10 to 3.00 percent subrounded stones
Parent material: Residuum weathered from metasandstone and/or phyllite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- Bedrock may interfere with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: FF
Hydric soil: No

39E—McCamy fine sandy loam, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 180 acres
Shape of areas: Irregular

Map Unit Composition

McCamy soil and similar inclusions: Typically 85 percent, ranging from about 70 to 95 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 5 inches—brown fine sandy loam

Subsoil:
5 to 9 inches—brown fine sandy loam
9 to 23 inches—yellowish red sandy clay loam

Substratum:
23 to 26 inches—yellowish red gravelly sandy loam

Soft bedrock:
26 to 31 inches—bedrock

Hard bedrock:
31 inches—bedrock

Minor Components

Dissimilar components:
- Sylco soils, which have less clay and more rock fragments in the subsoil than the McCamy soil; in similar landform positions
- Keener soils, which are very deep to bedrock; on footslopes and lower backslopes
- Sylvatus and Unicoi soils, which are shallow to hard bedrock and have less clay and more rock fragments in the subsoil than the McCamy soil; in similar landform positions
- Rock outcrops in landform positions similar to those of the McCamy soil

Similar components:
- McCamy soils that have fewer stones or cobbles on the surface
- Soils that have a yellowish brown subsoil; in landform positions similar to those of the McCamy soil

Soil Properties and Qualities

Available water capacity: Very low (about 2.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.10 to 3.00 percent subrounded stones
Parent material: Residuum weathered from metasandstone and/or phyllite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: FF
Hydric soil: No

40D—Mt Rogers-Bloodyhorse-Rock outcrop complex, 7 to 35 percent slopes, rubbly, windswept

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on high mountains
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 45 acres
Shape of areas: Irregular
Note: Areas of this map unit occur at high elevations where windy conditions are common

Map Unit Composition

Mt Rogers soil and similar inclusions: Typically 45 percent, ranging from about 40 to 50 percent
Bloodyhorse soil and similar inclusions: Typically 25 percent, ranging from about 20 to 30 percent
Rock outcrop: Typically 15 percent, ranging from about 10 to 20 percent

Typical Profile

Mt Rogers

Surface layer:
0 to 10 inches—black gravelly loam (very dark grayish brown, dry)
10 to 16 inches—very dark grayish brown gravelly loam (pale brown, dry)

Subsoil:
16 to 33 inches—dark brown very cobbly loam (pale brown, dry)

Substratum:
33 to 62 inches—dark yellowish brown extremely cobbly coarse sandy loam

Bloodyhorse

Surface layer:
0 to 12 inches—dark brown gravelly loam (dark yellowish brown, dry)

Subsoil:
12 to 28 inches—yellowish brown very gravelly loam

Substratum:
28 to 37 inches—yellowish brown extremely gravelly loam

Hard bedrock:
37 inches—granite bedrock

Rock outcrop

This part of the map unit consists of outcrops of porphyritic rhyolite that are about 10 to 200 feet apart.

Minor Components

Dissimilar components:
- Nopan soils, which are poorly drained and have fewer rock fragments in the subsoil than the Mt Rogers and Bloodyhorse soils; on concave footslopes and toeslopes

Similar components:
- Mt Rogers soils that have fewer boulders or stones on the surface
- Balsam soils, which are similar to the Mt Rogers soil; on footslopes, toeslopes, and lower backslopes
- Buzzrock soils, which are deep to hard bedrock; in landform positions similar to those of the Mt Rogers soil
- Soils that have a dark surface layer that is thicker than that of the Mt Rogers soil; in similar landform positions
- Soils that are moderately well drained and similar to the Mt Rogers soil; on concave footslopes and toeslopes
- Areas with rock outcrops that are spaced more than 200 feet apart; in landform positions similar to those of the Mt Rogers soil
- Bloodyhorse soils that have fewer boulders or stones on the surface
- Buzzrock soils, which are deep to hard bedrock; in landform positions similar to those of the Bloodyhorse soils

- Soils that are shallow to hard bedrock; in landform positions similar to those of the Bloodyhorse soil
- Soils that have a dark surface layer that is thicker than that of the Bloodyhorse soil; in similar landform positions
- Areas with rock outcrops that are spaced more than 200 feet apart; in landform positions simliar to those of the Bloodyhorse soil

Properties and Qualities of Mt. Rogers and Bloodyhorse Soils

Available water capacity: Mt Rogers—low (about 4.7 inches); Bloodyhorse—low (about 3.3 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Mt Rogers—very deep (more than 60 inches); Bloodyhorse—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Mt Rogers—more than 60 inches; Bloodyhorse—20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Mt Rogers—medium; Bloodyhorse—very high
Surface fragments: About 8.00 to 25.00 percent subangular boulders and about 7.00 to 25.00 percent subangular stones
Parent material: Mt Rogers—colluvium and/or creep deposits derived from rhyolite; Bloodyhorse—creep deposits over residuum weathered from rhyolite, residuum weathered from granite, and/or residuum weathered from gneiss

Use and Management Considerations

Cropland

- This map unit is unsuited to cropland.

Pastureland

- This map unit is unsuited to pastureland.

Woodland

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.

- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Windy conditions may reduce tree quality.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields

- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Mt Rogers and Bloodyhorse—7s; Rock outcrop—8
Virginia soil management group: Mt Rogers—GG; Bloodyhorse—JJ; Rock outcrop—none assigned
Hydric soils: Mt Rogers and Bloodyhorse—no; Rock outcrop—not rated

40F—Mt Rogers-Bloodyhorse-Rock outcrop complex, 35 to 80 percent slopes, rubbly, windswept

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on high mountains (fig. 9)
Position on the landform: Backslopes and very steep shoulders and summits
Size of areas: 5 to 150 acres
Shape of areas: Irregular
Note: Areas of this map unit occur at high elevations where windy conditions are common

Map Unit Composition

Mt Rogers soil and similar inclusions: Typically 45 percent, ranging from about 40 to 50 percent
Bloodyhorse soil and similar inclusions: Typically 25 percent, ranging from about 20 to 30 percent
Rock outcrop: Typically 15 percent, ranging from about 10 to 20 percent.

Figure 9.—Bedrock exposed in an area of Mt Rogers-Bloodyhorse-Rock outcrop complex, 35 to 80 percent slopes, rubbly, windswept.

Typical Profile

Mt Rogers

Surface layer:
0 to 10 inches—black gravelly loam (very dark grayish brown, dry)
10 to 16 inches—very dark grayish brown gravelly loam (pale brown, dry)

Subsoil:
16 to 33 inches—dark brown very cobbly loam (pale brown, dry)

Substratum:
33 to 62 inches—dark yellowish brown extremely cobbly coarse sandy loam

Bloodyhorse

Surface layer:
0 to 12 inches—dark brown gravelly loam (dark yellowish brown, dry)

Subsoil:
12 to 28 inches—yellowish brown very gravelly loam

Substratum:
28 to 37 inches—yellowish brown extremely gravelly loam

Hard bedrock:
37 inches—granite bedrock

Rock outcrop

This part of the map unit consists of outcrops of porphyritic rhyolite that are about 10 to 200 feet apart.

Minor Components

Dissimilar components:
- Nopan soils, which are poorly drained and have fewer rock fragments in the subsoil than the Mt Rogers and Bloodyhorse soils; on concave footslopes and toeslopes

Similar components:
- Mt Rogers soils that have fewer boulders or stones on the surface
- Balsam soils, which are similar to the Mt Rogers soil; on footslopes, toeslopes, and lower backslopes
- Buzzrock soils, which are deep to hard bedrock; in landform positions similar to those of the Mt Rogers soil
- Soils that have a dark surface layer that is thicker than that of the Mt Rogers soil; in similar landform positions
- Soils that are moderately well drained and similar to the Mt Rogers soil; on concave footslopes and toeslopes
- Areas with rock outcrops that are spaced more than 200 feet apart; in landform positions similar to those of the Mt Rogers soil
- Bloodyhorse soils that have fewer boulders or stones on the surface
- Buzzrock soils, which are deep to hard bedrock; in landform positions similar to those of the Bloodyhorse soil
- Soils that are shallow to hard bedrock; in landform positions similar to those of the Bloodyhorse soil
- Soils that have a dark surface layer that is thicker than that of the Bloodyhorse soil; in similar landform positions
- Areas with rock outcrops that are spaced more than 200 feet apart; in landform positions similar to those of the Bloodyhorse soil

Properties and Qualities of the Mt Rogers and Bloodyhorse Soils

Available water capacity: Mt Rogers—low (about 4.7 inches); Bloodyhorse—low (about 3.3 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Mt Rogers—very deep (more than 60 inches); Bloodyhorse—moderately deep (20 to 40 inches)
Depth to root-restrictive feature: Mt Rogers—more than 60 inches; Bloodyhorse—20 to 40 inches to bedrock (lithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Mt Rogers—medium; Bloodyhorse—very high
Surface fragments: About 8.00 to 25.00 percent subangular boulders and about 7.00 to 25.00 percent subangular stones
Parent material: Mt Rogers—colluvium and/or creep deposits derived from rhyolite; Bloodyhorse—creep deposits over residuum weathered from rhyolite, residuum weathered from granite, and/or residuum weathered from gneiss

Use and Management Considerations

Cropland

- This map unit is unsuited to cropland.

Pastureland

- This map unit is unsuited to pastureland.

Woodland

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Windy conditions may reduce tree quality.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields

- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Mt Rogers and Bloodyhorse—7s; Rock outcrop—8
Virginia soil management group: Mt Rogers—GG; Bloodyhorse—JJ; Rock outcrop—none assigned
Hydric soils: Mt Rogers and Bloodyhorse—no; Rock outcrop—not rated

Figure 10.—A view of Mt Rogers-Buzzrock complex, 7 to 15 percent slopes, very bouldery, windswept. This map unit occurs at some of the highest elevations in the county.

41C—Mt Rogers-Buzzrock complex, 7 to 15 percent slopes, very bouldery, windswept

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on high mountains (fig. 10)
Position on the landform: Summits and shoulders
Size of areas: 5 to 85 acres
Shape of areas: Irregular
Note: Areas of this map unit occur at high elevations where windy conditions are common

Map Unit Composition

Mt Rogers soil and similar inclusions: Typically 45 percent, ranging from about 40 to 50 percent
Buzzrock soil and similar inclusions: Typically 40 percent, ranging from about 35 to 45 percent

Typical Profile

Mt Rogers

Surface layer:
0 to 10 inches—black gravelly loam (very dark grayish brown, dry)
10 to 16 inches—very dark grayish brown gravelly loam (pale brown, dry)

Subsoil:
16 to 33 inches—dark brown very cobbly loam (pale brown, dry)

Substratum:
33 to 62 inches—dark yellowish brown extremely cobbly coarse sandy loam

Buzzrock

Surface layer:
0 to 14 inches—very dark brown loam (very dark grayish brown, dry)

Subsoil:
14 to 20 inches—dark yellowish brown very channery loam

Substratum:
20 to 42 inches—horizon is 95 percent rock fragments and 5 percent fine-earth material; fine-earth material is yellowish brown loam

Hard bedrock:
42 inches—rhyolite bedrock

Minor Components

Dissimilar components:
- Nopan soils, which are poorly drained and have fewer rock fragments in the subsoil than the Mt Rogers and Buzzrock soils; on concave footslopes and toeslopes
- Soils that have fewer rock fragments and more clay in the subsoil than the Mt Rogers and Buzzrock soils; in similar landform positions
- Soils that are shallow to hard bedrock; on convex summits and shoulders

Similar components:
- Mt Rogers soils that have fewer boulders or stones on the surface
- Balsam soils, which are similar to the Mt Rogers soil; on footslopes, toeslopes, and lower backslopes
- Soils that are moderately well drained and similar to the Mt Rogers soil; on concave footslopes and toeslopes
- Soils that have a dark surface layer that is thicker than that of the Mt Rogers soil; in similar landform positions
- Soils that have a dark surface layer that is thinner than that of the Mt Rogers soil; in similar landform positions
- Buzzrock soils that have fewer boulders or stones on the surface
- Balsam soils, which are similar to the Buzzrock soil; on footslopes, toeslopes, and lower backslopes
- Soils that have a dark surface layer that is thicker than that of the Buzzrock soil; in similar landform positions
- Soils that have a dark surface layer that is thinner than that of the Buzzrock soil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Mt Rogers—low (about 4.7 inches); Buzzrock—very low (about 2.8 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Mt Rogers—very deep (more than 60 inches); Buzzrock—deep (40 to 60 inches)
Depth to root-restrictive feature: Mt Rogers—more than 60 inches; Buzzrock—40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Low
Surface fragments: About 0.10 to 3.00 percent subangular boulders

Parent material: Mt Rogers—colluvium and/or creep deposits derived from rhyolite; Buzzrock—creep deposits derived from rhyolite

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.

Christmas trees

Suitability: Well suited
- Windy conditions may reduce tree quality.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: Mt Rogers—GG; Buzzrock—JJ
Hydric soils: No

41D—Mt Rogers-Buzzrock complex, 15 to 35 percent slopes, very bouldery, windswept

Setting

Major land resource area: Blue Ridge (MLRA 130)

Landform: Ridges and knobs on high mountains
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 200 acres
Shape of areas: Irregular
Note: Areas of this map unit occur at high elevations where windy conditions are common

Map Unit Composition

Mt Rogers soil and similar inclusions: Typically 45 percent, ranging from about 40 to 50 percent
Buzzrock soil and similar inclusions: Typically 40 percent, ranging from about 35 to 45 percent

Typical Profile

Mt Rogers

Surface layer:
0 to 10 inches—black gravelly loam (very dark grayish brown, dry)
10 to 16 inches—very dark grayish brown gravelly loam (pale brown, dry)

Subsoil:
16 to 33 inches—dark brown very cobbly loam (pale brown, dry)

Substratum:
33 to 62 inches—dark yellowish brown extremely cobbly coarse sandy loam

Buzzrock

Surface layer:
0 to 14 inches—very dark brown loam (very dark grayish brown, dry)

Subsoil:
14 to 20 inches—dark yellowish brown very channery loam

Substratum:
20 to 42 inches—horizon is 95 percent rock fragments and 5 percent fine-earth material; fine-earth material is yellowish brown loam

Hard bedrock:
42 inches—rhyolite bedrock

Minor Components

Dissimilar components:
- Nopan soils, which are poorly drained and have fewer rock fragments in the subsoil than the Mt Rogers and Buzzrock soils; on concave footslopes and toeslopes
- Soils that have fewer rock fragments and more clay in the subsoil than the Mt Rogers and Buzzrock soils; in similar landform positions
- Soils that are shallow to hard bedrock and similar to the Mt Rogers and Buzzrock soils; on convex summits and shoulders

Similar components:
- Mt Rogers soils that have fewer boulders or stones on the surface
- Balsam soils, which are similar to the Mt Rogers soil; on footslopes, toeslopes, and lower backslopes
- Soils that are moderately well drained and similar to the Mt Rogers soil; on concave footslopes and toeslopes
- Soils that have a dark surface layer that is thicker than that of the Mt Rogers soil; in similar landform positions

- Soils that have a dark surface layer that is thinner than that of the Mt Rogers soil; in similar landform positions
- Buzzrock soils that have fewer boulders or stones on the surface
- Balsam soils, which are similar to the Buzzrock soil; on footslopes, toeslopes, and lower backslopes
- Soils that have a dark surface layer that is thicker than that of the Buzzrock soil; in similar landform positions
- Soils that have a dark surface layer that is thinner than that of the Buzzrock soil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Mt Rogers—low (about 4.7 inches); Buzzrock—very low (about 2.8 inches)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Mt Rogers—very deep (more than 60 inches); Buzzrock—deep (40 to 60 inches)
Depth to root-restrictive feature: Mt Rogers—more than 60 inches; Buzzrock—40 to 60 inches to bedrock (lithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent subangular boulders
Parent material: Mt Rogers—colluvium and/or creep deposits derived from rhyolite; Buzzrock—creep deposits derived from rhyolite

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Windy conditions may reduce tree quality.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: Mt Rogers—GG; Buzzrock—JJ
Hydric soils: No

42C—Peaks very gravelly loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Peaks soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—dark yellowish brown very gravelly loam

Subsurface layer:
4 to 8 inches—dark yellowish brown very gravelly loam

Subsoil:
8 to 23 inches—yellowish brown very gravelly loam

Substratum:
23 to 32 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
32 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Edneyville soils, which are very deep to bedrock and have fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Edneytown and Glenelg soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Pigeonroost and Cowee soils, which have more clay and fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Peaks soil; on footslopes, toeslopes, and lower backslopes
- Areas with stony surfaces in landform positions similar to those of the Peaks soil
- Rock outcrops in landform positions similar to those of the Peaks soil

Similar components:
- Peaks soils that have cobbly surface horizons
- Soils that are shallow to hard bedrock; in landform positions similar to those of the Peaks soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from granite, gneiss, and/or schist

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Moderately suited to northern red oak, chestnut oak, and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.

- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6s
Virginia soil management group: JJ
Hydric soil: No

42D—Peaks very gravelly loam, 15 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Peaks soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—dark yellowish brown very gravelly loam

Subsurface layer:
4 to 8 inches—dark yellowish brown very gravelly loam

Subsoil:
8 to 23 inches—yellowish brown very gravelly loam

Substratum:
23 to 32 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
32 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Edneyville soils, which are very deep to bedrock and have fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Edneytown and Glenelg soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Pigeonroost and Cowee soils, which have more clay and fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Peaks soil; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in landform positions similar to those of the Peaks soil

Similar components:
- Peaks soils that have cobbly or stony surfaces
- Soils that are shallow to hard bedrock; in landform positions similar to those of the Peaks soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from granite, gneiss, and/or schist

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, chestnut oak, and eastern white pine

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s

Virginia soil management group: JJ
Hydric soil: No

42E—Peaks very gravelly loam, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 450 acres
Shape of areas: Irregular

Map Unit Composition

Peaks soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—dark yellowish brown very gravelly loam

Subsurface layer:
4 to 8 inches—dark yellowish brown very gravelly loam

Subsoil:
8 to 23 inches—yellowish brown very gravelly loam

Substratum:
23 to 32 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
32 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Edneyville soils, which are very deep to bedrock and have fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Edneytown and Glenelg soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Pigeonroost and Cowee soils, which have more clay and fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Peaks soil; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in landform positions similar to those of the Peaks soil

Similar components:
- Peaks soils that have cobbly or stony surfaces
- Soils that are shallow to hard bedrock; in landform positions similar to those of the Peaks soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from granite, gneiss, and/or schist

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, chestnut oak, and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

Suitability: Well suited
- South to southwest aspects on steep slopes become droughty and require additional management measures.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: JJ
Hydric soil: No

43C—Peaks very gravelly loam, 7 to 15 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

Peaks soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—dark yellowish brown very gravelly loam

Subsurface layer:
4 to 8 inches—dark yellowish brown very gravelly loam

Subsoil:
8 to 23 inches—yellowish brown very gravelly loam

Substratum:
23 to 32 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
32 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Edneyville soils, which are very deep to bedrock and have fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions

- Edneytown and Glenelg soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Pigeonroost and Cowee soils, which have more clay and fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Peaks soil; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in landform positions similar to those of the Peaks soil

Similar components:
- Peaks soils that have fewer stones or cobbles on the surface
- Soils that are shallow to hard bedrock; in landform positions similar to those of the Peaks soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 3.00 to 15.00 percent subrounded stones
Parent material: Residuum weathered from granite, gneiss, and/or schist

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, chestnut oak, and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.

- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: JJ
Hydric soil: No

43D—Peaks very gravelly loam, 15 to 35 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 400 acres
Shape of areas: Irregular

Map Unit Composition

Peaks soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—dark yellowish brown very gravelly loam

Subsurface layer:
4 to 8 inches—dark yellowish brown very gravelly loam

Subsoil:
8 to 23 inches—yellowish brown very gravelly loam

Substratum:
23 to 32 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
32 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Edneyville soils, which are very deep to bedrock and have fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Edneytown and Glenelg soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Pigeonroost and Cowee soils, which have more clay and fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Peak soil; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in landform positions similar to those of the Peaks soil

Similar components:
- Peaks soils that have fewer stones or cobbles on the surface
- Soils that are shallow to hard bedrock; in landform positions similar to those of the Peaks soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 3.00 to 15.00 percent subrounded stones
Parent material: Residuum weathered from granite, gneiss, and/or schist

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, chestnut oak, and eastern white pine

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

- This soil is well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: JJ
Hydric soil: No

43E—Peaks very gravelly loam, 35 to 55 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Peaks soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—dark yellowish brown very gravelly loam

Subsurface layer:
4 to 8 inches—dark yellowish brown very gravelly loam

Subsoil:
8 to 23 inches—yellowish brown very gravelly loam

Substratum:
23 to 32 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
32 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Edneyville soils, which are very deep to bedrock and have fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Edneytown and Glenelg soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Pigeonroost and Cowee soils, which have more clay and fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Peaks soil; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in landform positions similar to those of the Peaks soil

Similar components:
- Peaks soils that have fewer stones or cobbles on the surface
- Soils that are shallow to hard bedrock; in landform positions similar to those of the Peaks soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Very low (about 1.6 inches)

Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 3.00 to 15.00 percent subrounded stones
Parent material: Residuum weathered from granite, gneiss, and/or schist

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, chestnut oak, and eastern white pine

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

Suitability: Well suited

- South to southwest aspects on steep slopes become droughty and require additional management measures.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: JJ
Hydric soil: No

43F—Peaks very gravelly loam, 55 to 80 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Backslopes and very steep shoulders and summits
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Peaks soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—dark yellowish brown very gravelly loam

Subsurface layer:
4 to 8 inches—dark yellowish brown very gravelly loam

Subsoil:
8 to 23 inches—yellowish brown very gravelly loam

Substratum:
23 to 32 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
32 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Edneyville soils, which are very deep to bedrock and have fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Edneytown and Glenelg soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Pigeonroost and Cowee soils, which have more clay and fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Peaks soil; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in landform positions similar to those of the Peaks soil

Similar components:
- Peaks soils that have fewer stones or cobbles on the surface
- Soils that are shallow to hard bedrock; in landform positions similar to those of the Peaks soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 3.00 to 15.00 percent subrounded stones
Parent material: Residuum weathered from granite, gneiss, and/or schist

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to northern red oak, chestnut oak, and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.

- Because of the slope, the use of equipment for planting and seeding is impractical.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.

Christmas trees

Suitability: Well suited
- South to southwest aspects on steep slopes become droughty and require additional management measures.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: JJ
Hydric soil: No

44C—Pigeonroost loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Pigeonroost soil and similar inclusions: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsoil:
5 to 24 inches—strong brown clay loam
24 to 37 inches—strong brown sandy loam

Soft bedrock:
37 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Pigeonroost soils that have cobbly surface horizons
- Peaks soils, which have less clay and more rock fragments in the subsoil than the Pigeonroost soil; in similar landform positions
- Edneytown soils, which are very deep to bedrock; in landform positions similar to those of the Pigeonroost soil
- Edneyville soils, which are very deep to bedrock and have less clay in the subsoil than the Pigeonroost soil; in similar landform positions
- Hayesville soils, which are very deep to bedrock and have more clay in the subsoil than the Pigeonroost soil; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Areas with stony surfaces; in landform positions similar to those of the Piegeonroost soil
- Rock outcrops in landform positions similar to those of the Pigeonroost soil

Similar components:
- Soils that have a red subsoil; in landform positions similar to those of the Pigeonroost soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Low (about 5.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from gneiss, schist, and/or granite

Use and Management Considerations

Cropland

Suitability: Well suited to grass-legume hay; moderately suited to corn and alfalfa hay

- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: N
Hydric soil: No

44D—Pigeonroost loam, 15 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)

Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Pigeonroost soil and similar inclusions: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsoil:
5 to 24 inches—strong brown clay loam
24 to 37 inches—strong brown sandy loam

Soft bedrock:
37 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Peaks soils, which have less clay and more rock fragments in the subsoil than the Pigeonroost soil; in similar landform positions
- Edneytown soils, which are very deep to bedrock; in landform positions similar to those of the Pigeonroost soil
- Edneyville soils, which are very deep to bedrock and have less clay in the subsoil than the Pigeonroost soil; in similar landform positions
- Hayesville soils, which are very deep to bedrock and have more clay in the subsoil than the Pigeonroost soil; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in landform positions similar to those of the Pigeonroost soil

Similar components:
- Pigeonroost soils that have cobbly or stony surfaces
- Soils that have a red subsoil; in landform positions similar to those of the Pigeonroost soiil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Low (about 5.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from gneiss, schist, and/or granite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: N
Hydric soil: No

44E—Pigeonroost loam, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 450 acres
Shape of areas: Irregular

Map Unit Composition

Pigeonroost soil and similar inclusions: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsoil:
5 to 24 inches—strong brown clay loam
24 to 37 inches—strong brown sandy loam

Soft bedrock:
37 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Peaks soils, which have less clay and more rock fragments in the subsoil than the Pigeonroost soil; in similar landform positions
- Edneytown soils, which are very deep to bedrock; in landform positions similar to those of the Pigeonroost soil
- Edneyville soils, which are very deep to bedrock and have less clay in the subsoil than the Pigeonroost soil; in similar landform positions
- Hayesville soils, which are very deep to bedrock and have more clay in the subsoil than the Pigeonroost soil; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in landform positions similar to those of the Pigeonroost soil

Similar components:
- Pigeonroost soils that have cobbly or stony surfaces
- Soils that have a red subsoil; in landform positions similar to those of the Pigeonroost soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Low (about 5.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low

Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from gneiss, schist, and/or granite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: N
Hydric soil: No

45D—Pigeonroost gravelly loam, 7 to 35 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Pigeonroost soil and similar inclusions: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Surface layer:
0 to 5 inches—dark yellowish brown gravelly loam

Subsoil:
5 to 24 inches—strong brown clay loam
24 to 37 inches—strong brown sandy loam

Soft bedrock:
37 inches—bedrock

Minor Components

Dissimilar components:
- Peaks soils, which have less clay and more rock fragments in the subsoil than the Pigeonroost soil; in similar landform positions
- Edneytown soils, which are very deep to bedrock; in landform positions similar to those of the Pigeonroost soil
- Edneyville soils, which are very deep to bedrock and have less clay in the subsoil than the Pigeonroost soil; in similar landform positions
- Hayesville soils, which are very deep to bedrock and have more clay in the subsoil than the Pigeonroost soil; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in landform positions similar to those of the Pigeonroost soil

Similar components:
- Pigeonroost soils that have fewer stones or cobbles on the surface
- Soils that have a red subsoil; in landform positions similar to those of the Pigeonroost soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Low (about 4.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None

Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Residuum weathered from gneiss, schist, and/or granite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The low soil strength interferes with the construction of haul roads and log landings.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland

Land capability class: 7s
Virginia soil management group: N
Hydric soil: No

45E—Pigeonroost gravelly loam, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 450 acres
Shape of areas: Irregular

Map Unit Composition

Pigeonroost soil and similar inclusions: Typically 85 percent, ranging from about 80 to 90 percent

Typical Profile

Surface layer:
0 to 5 inches—dark yellowish brown gravelly loam

Subsoil:
5 to 24 inches—strong brown clay loam
24 to 37 inches—strong brown sandy loam

Soft bedrock:
37 inches—bedrock

Minor Components

Dissimilar components:
- Peaks soils, which have less clay and more rock fragments in the subsoil than the Pigeonroost soil; in similar landform positions
- Edneytown soils, which are very deep to bedrock; in landform positions similar to those of the Pigeonroost soil
- Edneyville soils, which are very deep to bedrock and have less clay in the subsoil than the Pigeonroost soil; in similar landform positions
- Hayesville soils, which are very deep to bedrock and have more clay in the subsoil than the Pigeonroost soil; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in landform positions similar to those of the Pigeonroost soil

Similar components:
- Pigeonroost soils that have fewer stones or cobbles on the surface
- Soils that have a red subsoil; in landform positions similar to those of the Pigeonroost soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Soil Properties and Qualities

Available water capacity: Low (about 4.8 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)

Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Residuum weathered from gneiss, schist, and/or granite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: N
Hydric soil: No

46E—Pigeonroost-Rock outcrop complex, 25 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges, hills, and spurs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 300 acres
Shape of areas: Irregular

Map Unit Composition

Pigeonroost soil and similar inclusions: Typically 60 percent, ranging from about 55 to 65 percent
Rock outcrop: Typically 30 percent, ranging from about 25 to 35 percent

Typical Profile

Pigeonroost

Surface layer:
0 to 5 inches—dark yellowish brown loam

Subsoil:
5 to 24 inches—strong brown clay loam
24 to 37 inches—strong brown sandy loam

Soft bedrock:
37 inches—gneiss bedrock

Rock outcrop

This part of the map unit constists of outcrops of quartz monzonite, gneiss, and granite that are about 10 to 200 feet apart.

Minor Components

Dissimilar components:
- Peaks soils, which have less clay and more rock fragments in the subsoil than the Pigeonroost soil; in similar landform positions
- Edneytown soils, which are very deep to bedrock; in landform positions similar to those of the Pigeonroost soil
- Edneyville soils, which are very deep to bedrock and have less clay in the subsoil than the Pigeonroost soil; in similar landform positions
- Hayesville soils, which are very deep to bedrock and have more clay in the subsoil than the Pigeonroost soil; in similar landform positions
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes

Similar components:
- Pigeonroost soils that have cobbly or stony surfaces

- Soils that have a red subsoil; in landform positions similar to those of the Pigeonroost soil
- Areas with rock outcrops that are spaced more than 200 feet apart; in landform positions similar to those of the Pigeonroost soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Properties and Qualities of the Pigeonroost Soil

Available water capacity: Low (about 5.1 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from gneiss, schist, and/or granite

Use and Management Considerations

Cropland

- This map unit is unsuited to cropland.

Pastureland

- This map unit is unsuited to pastureland.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is

reduced and the difficulty of constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Pigeonroost—7s; Rock outcrop—8
Virginia soil management group: Pigeonroost—N; Rock outcrop—none assigned
Hydric soils: Pigeonroost—no; Rock outcrop—not rated

47D—Pineola loam, 15 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and hills on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 50 acres
Shape of areas: Irregular

Map Unit Composition

Pineola soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 10 inches—very dark grayish brown loam

Subsoil:
10 to 15 inches—brown loam
15 to 26 inches—yellowish brown gravelly clay loam

Substratum:
26 to 29 inches—yellowish brown gravelly sandy loam

Soft bedrock:
29 inches—bedrock

Minor Components

Dissimilar components:
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes

- Soils that have less clay and more rock fragments in the subsoil than the Pineola soil; in similar landform positions
- Soils that are very deep to bedrock; in landform positions similar to those of the Pineola soil
- Soils that are shallow to hard bedrock; in landform positions similar to those of the Pineola soil
- Rock outcrops in landform positions similar to those of the Pineola soil

Similar components:
- Pineola soils that have gravelly, cobbly, or stony surfaces
- Pigeonroost soils, which have a surface layer that is thinner or lighter colored than that of the Pineola soil; in similar landform positions
- Soils that have a red subsoil; in landform positions similar to those of the Pineola soil

Soil Properties and Qualities

Available water capacity: Low (about 3.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from metasandstone, metagraywacke, and/or phyllite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Moderately suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Well suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.

- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: L
Hydric soil: No

48E—Pineola loam, 35 to 55 percent slopes, very stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and hills on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Pineola soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 10 inches—very dark grayish brown loam

Subsoil:
10 to 15 inches—brown loam
15 to 26 inches—yellowish brown gravelly clay loam

Substratum:
26 to 29 inches—yellowish brown gravelly sandy loam

Soft bedrock:
29 inches—bedrock

Minor Components

Dissimilar components:
- Tate soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes
- Soils that have less clay and more rock fragments in the subsoil than the Pineola soil; in similar landform positions
- Soils that are very deep to bedrock; in landform positions similar to those of the Pineola soil
- Soils that are shallow to hard bedrock; in landform positions similar to those of the Pineola soil
- Rock outcrops in landform positions similar to those of the Pineola soil

Similar components:
- Pineola soils that have fewer stones or cobbles on the surface
- Soils that have a red subsoil; in landform positions similar to those of the Pineola soil
- Pigeonroost soils, which have a thinner or lighter colored surface layer than the Pineola soil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Low (about 3.9 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (paralithic)
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.10 to 3.00 percent stones
Parent material: Residuum weathered from metasandstone, metagraywacke, and/or phyllite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to northern red oak, yellow-poplar, and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the nature and depth of the soft bedrock, the ease of excavation is reduced and the difficulty of constructing foundations and installing utilities is increased.

Septic tank absorption fields

- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength may cause structural damage to local roads and streets.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: L
Hydric soil: No

49—Pits, quarries

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and hills on low mountains and foothills
Position on the landform: Summits, shoulders, and backslopes
Size of areas: 5 to 10 acres
Shape of areas: Variable; depends on ownership boundaries

Map Unit Composition

Pits, quarries: Typically 100 percent

Definition

Areas of this map unit are composed of open excavations from which soil and underlying rock have been removed, exposing bedrock (fig. 11). These types of pits are associated with mining or quarry activities. The sides of the pits are generally steep, and the floor is nearly level. Piles of stones and boulders are commonly on the pit floor. These areas may contain water in some low-lying places.

Use and Management Considerations

Onsite investigation is needed to determine the suitability of any area for specific uses.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 8

Figure 11.—Granite being mined in an area of Pits, quarries, at the Cardinal Stone Quarry about 8 miles south of Galax, Virginia, along Route 613.

Virginia soil management group: None assigned
Hydric soil: Not rated

50F—Rock outcrop-Peaks complex, 25 to 80 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Backslopes and very steep shoulders and summits
Size of areas: 5 to 450 acres
Shape of areas: Irregular

Map Unit Composition

Rock outcrop: Typically 50 percent, ranging from about 40 to 55 percent
Peaks soil and similar inclusions: Typically 40 percent, ranging from about 35 to 45 percent

Typical Profile

Rock outcrop

This part of the map unit consists of outcrops of quartz monzonite, gneiss, granite, mica schist, ryholite, and other metamorphic and igneous rocks that are as much as 50 feet high and less than 10 feet apart.

Peaks

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 4 inches—dark yellowish brown very gravelly loam

Subsurface layer:
4 to 8 inches—dark yellowish brown very gravelly loam

Subsoil:
8 to 23 inches—yellowish brown very gravelly loam

Substratum:
23 to 32 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
32 inches—gneiss bedrock

Minor Components

Dissimilar components:
- Edneyville soils, which are very deep to bedrock and have fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Edneytown and Glenelg soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Pigeonroost and Cowee soils, which have more clay and fewer rock fragments in the subsoil than the Peaks soil; in similar landform positions
- Tate soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Peaks soil; on footslopes, toeslopes, and lower backslopes
- Greenlee soils, which are very deep to bedrock; on footslopes, toeslopes, and lower backslopes

Similar components:
- Peaks soils that have cobbly or stony surfaces
- Soils that are shallow to hard bedrock; in landform positions similar to those of the Peaks soil
- Areas with rock outcrops that are spaced more than 10 feet apart; in landform positions similar to those of the Peaks soil
- Soils that have a dark surface layer; on elevated summits and north-facing backslopes

Properties and Qualities of the Peaks Soil

Available water capacity: Very low (about 1.6 inches)
Slowest saturated hydraulic conductivity: High (about 5.95 in/hr)
Depth class: Moderately deep (20 to 40 inches)
Depth to root-restrictive feature: 20 to 40 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from granite, gneiss, and/or schist

Use and Management Considerations

Cropland

- This map unit is unsuited to cropland.

Pastureland

- This map unit is unsuited to pastureland.

Woodland

- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- Because of rock outcrops, the use of equipment is impractical.

Christmas trees

- This map unit is unsuited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.
- Because of rock outcrops, rock removal may be needed.

Septic tank absorption fields

- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.
- Because of rock outcrops, special design of septic tank absorption fields is needed.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.
- Because of rock outcrops, special design of the grade of local roads and streets and special consideration of their location are needed to avoid rock removal.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Rock outcrop—8; Peaks—7s
Virginia soil management group: Rock outcrop—none assigned; Peaks—JJ
Hydric soils: Rock outcrop—not rated; Peaks—no

51B—Scales mucky peak, 0 to 7 percent slopes, very bouldery

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, saddles, and benches on high mountains
Position on the landform: Toeslopes
Size of areas: About 20 acres
Shape of areas: Irregular

Map Unit Composition

Scales soil and similar inclusions: Typically 95 percent, ranging from about 90 to 100 percent

Typical Profile

Organic layer:
0 to 2 inches—black peat
2 to 11 inches—black mucky peat

Substratum:
11 to 21 inches—grayish brown gravelly sandy clay loam; light olive brown masses of oxidized iron
21 to 33 inches—light olive brown clay loam; yellowish brown masses of oxidized iron
33 to 43 inches—light olive brown gravelly clay loam; yellowish brown masses of oxidized iron
43 to 62 inches—yellowish brown gravelly clay loam; yellowish brown masses of oxidized iron

Minor Components

Dissimilar components:
- Balsam soils, which are well drained and have more rock fragments in the subsoil than the Scales soil; on footslopes, toeslopes, and lower backslopes
- Mt Rogers soils, which are well drained and have more rock fragments in the subsoil than the Scales soil; on shoulders, summits, and backslopes
- Soils that are moderately well drained; in landform positions similar to those of the Scales soil

Similar components:
- Scales soils that have fewer boulders or stones on the surface
- Nopan soils, which have more sand in the subsoil than the Scales soil and do not have a thick organic surface layer; in similar landform positions

Soil Properties and Qualities

Available water capacity: Low (about 5.9 inches)
Slowest saturated hydraulic conductivity: Moderately low (about 0.06 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: 11 to 40 inches to densic material
Drainage class: Poorly drained
Depth to seasonal water saturation: About 0 to 6 inches
Water table kind: Apparent
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 0.10 to 3.00 percent subangular boulders
Parent material: Organic material over colluvium derived from rhyolite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Poorly suited

- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The seasonal high water table can affect equipment use, grazing patterns, and the viability of grass and legume species.
- Large stones on the surface may restrict the operation of some farm machinery.
- Frost action may damage the root systems of plants.

Woodland

Suitability: Poorly suited to northern red oak
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- Soil wetness may limit the use of log trucks.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- The seasonal high water table may restrict the period when excavations can be made.
- Because of the low soil strength, this soil is unfavorable for supporting heavy loads.
- The dense nature of the subsurface layer increases the difficulty of digging and compacting the soil material in shallow excavations.

Septic tank absorption fields

- The seasonal high water table greatly limits the absorption and proper treatment of the effluent from conventional septic systems.

Local roads and streets

- The seasonal high water table affects the ease of excavation and grading and reduces the bearing capacity of the soil.
- The low soil strength is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6s
Virginia soil management group: None assigned
Hydric soil: Yes

52C—Sylco-Sylvatus complex, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)

Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Summits and shoulders
Size of areas: 5 to 125 acres
Shape of areas: Irregular

Map Unit Composition

Sylco soil and similar inclusions: Typically 50 percent, ranging from about 45 to 55 percent
Sylvatus soil and similar inclusions: Typically 35 percent, ranging from about 30 to 40 percent

Typical Profile

Sylco

Surface layer:
0 to 4 inches—dark yellowish brown channery silt loam

Subsoil:
4 to 22 inches—brown very channery silt loam

Substratum:
22 to 27 inches—brown extremely channery silt loam

Hard bedrock:
27 inches—phyllite bedrock

Sylvatus

Surface layer:
0 to 2 inches—dark yellowish brown channery silt loam

Subsoil:
2 to 11 inches—yellowish brown very channery silt loam

Substratum:
11 to 16 inches—yellowish brown extremely channery silt loam

Hard bedrock:
16 inches—phyllite bedrock

Minor Components

Dissimilar components:
- Unicoi soils, which are excessively drained and have more sand and less silt in the subsoil than the Sylco and Sylvatus soils; in similar landform positions
- McCamy soils, which have more clay and fewer rock fragments in the subsoil than the Sylco and Sylvatus soils; in similar landform positions
- Keener soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Sylco and Sylvatus soils; on footslopes, toeslopes, and lower backslopes
- Areas with stony surfaces in landform positions similar to those of the Sylco and Sylvatus soils
- Rock outcrops in landform positions similar to those of the Sylco and Sylvatus soils

Similar components:
- Sylco soils that have cobbly surface horizons
- Sylvatus soils that have cobbly surface horizons

Soil Properties and Qualities

Available water capacity: Sylco—very low (about 2.9 inches); Sylvatus—very low (about 1.5 inches)
Slowest saturated hydraulic conductivity: Sylco—high (about 1.98 in/hr); Sylvatus—moderately high (about 0.57 in/hr)
Depth class: Sylco—moderately deep (20 to 40 inches); Sylvatus—shallow (10 to 20 inches)
Depth to root-restrictive feature: Sylco—20 to 40 inches to bedrock (lithic); Sylvatus—10 to 20 inches to bedrock (lithic)
Drainage class: Sylco—somewhat excessively drained; Sylvatus—well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from phyllite and metasandstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

Suitability: Poorly suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Moderately suited to eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

- These soils are well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.

- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Sylco—3e; Sylvatus—6s
Virginia soil management group: JJ
Hydric soils: No

52D—Sylco-Sylvatus complex, 15 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Sylco soil and similar inclusions: Typically 50 percent, ranging from about 45 to 55 percent
Sylvatus soil and similar inclusions: Typically 35 percent, ranging from about 30 to 40 percent

Typical Profile

Sylco

Surface layer:
0 to 4 inches—dark yellowish brown channery silt loam

Subsoil:
4 to 22 inches—brown very channery silt loam

Substratum:
22 to 27 inches—brown extremely channery silt loam

Hard bedrock:
27 inches—phyllite bedrock

Sylvatus

Surface layer:
0 to 2 inches—dark yellowish brown channery silt loam

Subsoil:
2 to 11 inches—yellowish brown very channery silt loam

Substratum:
11 to 16 inches—yellowish brown extremely channery silt loam

Hard bedrock:
16 inches—phyllite bedrock

Minor Components

Dissimilar components:
- Unicoi soils, which are excessively drained and have more sand and less silt in the subsoil than the Sylco and Sylvatus soils; in similar landform positions
- McCamy soils, which have more clay and fewer rock fragments in the subsoil than the Sylco and Sylvatus soils; in similar landform positions
- Keener soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Sylco and Sylvatus soils; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in landform positions similar to those of the Sylco and Sylvatus soils

Similar components:
- Sylco soils that have cobbly or stony surfaces
- Sylvatus soils that have cobbly or stony surfaces

Soil Properties and Qualities

Available water capacity: Sylco—very low (about 2.9 inches); Sylvatus—very low (about 1.5 inches)
Slowest saturated hydraulic conductivity: Sylco—high (about 1.98 in/hr); Sylvatus—moderately high (about 0.57 in/hr)
Depth class: Sylco—moderately deep (20 to 40 inches); Sylvatus—shallow (10 to 20 inches)
Depth to root-restrictive feature: Sylco—20 to 40 inches to bedrock (lithic); Sylvatus—10 to 20 inches to bedrock (lithic)
Drainage class: Sylco—somewhat excessively drained; Sylvatus—well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: None
Parent material: Residuum weathered from phyllite and metasandstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

Suitability: Poorly suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.
- The limited available water capacity may cause plants to suffer from moisture stress during the drier summer months.

Woodland

Suitability: Moderately suited to eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.

- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

- These soils are well suited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: JJ
Hydric soils: No

52E—Sylco-Sylvatus complex, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Sylco soil and similar inclusions: Typically 50 percent, ranging from about 45 to 55 percent
Sylvatus soil and similar inclusions: Typically 35 percent, ranging from about 30 to 40 percent

Typical Profile

Sylco

Surface layer:
0 to 4 inches—dark yellowish brown channery silt loam

Subsoil:
4 to 22 inches—brown very channery silt loam

Substratum:
22 to 27 inches—brown extremely channery silt loam

Hard bedrock:
27 inches—phyllite bedrock

Sylvatus

Surface layer:
0 to 2 inches—dark yellowish brown channery silt loam

Subsoil:
2 to 11 inches—yellowish brown very channery silt loam

Substratum:
11 to 16 inches—yellowish brown extremely channery silt loam

Hard bedrock:
16 inches—phyllite bedrock

Minor Components

Dissimilar components:
- Unicoi soils, which are excessively drained and have more sand and less silt in the subsoil than the Sylco and Sylvatus soils; in similar landform positions
- McCamy soils, which have more clay and fewer rock fragments in the subsoil than the Sylco and Sylvatus soils; in similar landform positions
- Keener soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Sylco and Sylvatus soils; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in landform positions similar to those of the Sylco and Sylvatus soils

Similar components:
- Sylco soils that have cobbly or stony surfaces
- Sylvatus soils that have cobbly or stony surfaces

Soil Properties and Qualities

Available water capacity: Sylco—very low (about 2.9 inches); Sylvatus—very low (about 1.5 inches)
Slowest saturated hydraulic conductivity: Sylco—high (about 1.98 in/hr); Sylvatus—moderately high (about 0.57 in/hr)
Depth class: Sylco—moderately deep (20 to 40 inches); Sylvatus—shallow (10 to 20 inches)
Depth to root-restrictive feature: Sylco—20 to 40 inches to bedrock (lithic); Sylvatus—10 to 20 inches to bedrock (lithic)
Drainage class: Sylco—somewhat excessively drained; Sylvatus—well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high

Surface fragments: None
Parent material: Residuum weathered from phyllite and metasandstone

Use and Management Considerations

Cropland

- These soils are unsuited to cropland.

Pastureland

- These soils are unsuited to pastureland.

Woodland

Suitability: Moderately suited to eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- South to southwest aspects on steep slopes become droughty and require additional management measures.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: JJ
Hydric soils: No

Figure 12.—An area of Tate loam, 2 to 7 percent slopes, on a footslope in the foreground. Peaks very gravelly loam, 15 to 35 percent slopes, is in the background.

53B—Tate loam, 2 to 7 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes and toeslopes (fig. 12)
Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

Tate soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 6 inches—dark yellowish brown loam

Subsoil:
6 to 12 inches—brown sandy loam
12 to 27 inches—strong brown clay loam
27 to 47 inches—strong brown sandy clay loam

Substratum:
47 to 62 inches—strong brown sandy loam

Minor Components

Dissimilar components:
- Tate soils that have cobbly surface horizons
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil than the Tate soil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil than the Tate soil; on flood plains
- Craigsville soils, which have more rock fragments and less clay in the subsoil than the Tate soil; on flood plains
- Areas with stony surfaces; in landform positions similar to those of the Tate soil

Similar components:
- Braddock soils, which have more clay in the subsoil than the Tate soil; in similar landform positions
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Tate soil
- Greenlee soils, which have more rock fragments and less clay in the subsoil than the Tate soil; in similar landform positions
- Thunder soils, which have more rock fragments in the subsoil than the Tate soil and a thicker or darker surface layer; in similar landform posiions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Colluvium and/or alluvium derived from igneous and metamorphic rock

Use and Management Considerations

Cropland

Suitability: Well suited to corn and grass-legume hay; moderately suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope may restrict the use of some mechanical planting equipment.

- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- This soil is well suited to building sites.

Septic tank absorption fields

- Because the excessive permeability limits the proper treatment of the effluent from conventional septic systems, the water table may become polluted.

Local roads and streets

- The low soil strength is unfavorable for supporting heavy loads.

Interpretive Groups

Prime farmland: All areas are prime farmland
Land capability class: 2e
Virginia soil management group: O
Hydric soil: No

53C—Tate loam, 7 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes and toeslopes
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Tate soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 6 inches—dark yellowish brown loam

Subsoil:
6 to 12 inches—brown sandy loam
12 to 27 inches—strong brown clay loam
27 to 47 inches—strong brown sandy clay loam

Substratum:
47 to 62 inches—strong brown sandy loam

Minor Components

Dissimilar components:
- Tate soils that have cobbly surface horizons

- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil than the Tate soil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil than the Tate soil; on flood plains
- Craigsville soils, which have more rock fragments and less clay in the subsoil than the Tate soil; on flood plains
- Areas with stony surfaces; in landform positions similar to those of the Tate soil

Similar components:
- Braddock soils, which have more clay in the subsoil than the Tate soil; in similar landform positions
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Tate soil
- Greenlee soils, which have more rock fragments and less clay in the subsoil than the Tate soil; in similar landform positions
- Thunder soils, which have more rock fragments in the subsoil than the Tate soil and have a thicker or darker surface layer; in similar landform posiions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Colluvium and/or alluvium derived from igneous and metamorphic rock

Use and Management Considerations

Cropland

Suitability: Well suited to grass-legume hay; moderately suited to corn and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings.

- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 3e
Virginia soil management group: O
Hydric soil: No

53D—Tate loam, 15 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes, toeslopes, and lower backslopes
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

Tate soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 6 inches—dark yellowish brown loam

Subsoil:
6 to 12 inches—brown sandy loam
12 to 27 inches—strong brown clay loam
27 to 47 inches—strong brown sandy clay loam

Substratum:
47 to 62 inches—strong brown sandy loam

Minor Components

Dissimilar components:
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil than the Tate soil; on flood plains

- Hatboro soils, which are poorly drained and have less clay in the subsoil than the Tate soil; on flood plains
- Craigsville soils which have more rock fragments and less clay in the subsoil than the Tate soil; on flood plains

Similar components:
- Tate soils that have cobbly or stony surfaces
- Braddock soils, which have more clay in the subsoil than the Tate soil; in similar landform positions
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Tate soil
- Greenlee soils, which have more rock fragments and less clay in the subsoil than the Tate soil; in similar landform positions
- Thunder soils, which have more rock fragments in the subsoil than the Tate soil and have a thicker or darker surface layer; in similar landform posiions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Colluvium and/or alluvium derived from igneous and metamorphic rock

Use and Management Considerations

Cropland

Suitability: Moderately suited to corn, grass-legume hay, and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.

- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4e
Virginia soil management group: O
Hydric soil: No

53E—Tate loam, 25 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes, toeslopes, and lower backslopes
Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

Tate soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 6 inches—dark yellowish brown loam

Subsoil:
6 to 12 inches—brown sandy loam
12 to 27 inches—strong brown clay loam
27 to 47 inches—strong brown sandy clay loam

Substratum:
47 to 62 inches—strong brown sandy loam

Minor Components

Dissimilar components:
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil than the Tate soil; on flood plains

- Hatboro soils, which are poorly drained and have less clay in the subsoil than the Tate soil; on flood plains
- Craigsville soils, which have more rock fragments and less clay in the subsoil than the Tate soil; on flood plains

Similar components:
- Tate soils that have cobbly or stony surfaces
- Braddock soils, which have more clay in the subsoil than the Tate soil; in similar landform positions
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Tate soil
- Greenlee soils, which have more rock fragments and less clay in the subsoil than the Tate soil; in similar landform positions
- Thunder soils, which have more rock fragments in the subsoil than the Tate soil and have a thicker or darker surface layer; in similar landform posiions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Colluvium and/or alluvium derived from igneous and metamorphic rock

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- The slope may restrict the use of some farm equipment.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.

- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 6e
Virginia soil management group: O
Hydric soil: No

54C—Tate loam, 7 to 15 percent slopes, stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes and toeslopes (fig. 13)
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Tate soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 6 inches—dark yellowish brown loam

Subsoil:
6 to 12 inches—brown sandy loam
12 to 27 inches—strong brown clay loam
27 to 47 inches—strong brown sandy clay loam

Substratum:
47 to 62 inches—strong brown sandy loam

Minor Components

Dissimilar components:
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil than the Tate soil; on flood plains

Figure 13.—A restored pioneer farm in Grayson Highlands State Park, in an area of Tate loam, 7 to 15 percent slopes, stony. Areas of this map unit are on footslopes and toeslopes.

- Hatboro soils, which are poorly drained and have less clay in the subsoil than the Tate soil; on flood plains
- Craigsville soils, which have more rock fragments and less clay in the subsoil than the Tate soil; on flood plains

Similar components:
- Tate soils that have fewer stones or cobbles on the surface
- Braddock soils, which have more clay in the subsoil than the Tate soil; in similar landform positions
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Tate soil
- Greenlee soils, which have more rock fragments and less clay in the subsoil than the Tate soil; in similar landform positions
- Thunder soils, which have more rock fragments in the subsoil than the Tate soil and have a thicker or darker surface layer; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None

Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.01 to 0.10 percent subrounded stones
Parent material: Colluvium and/or alluvium derived from igneous and metamorphic rock

Use and Management Considerations

Cropland

Suitability: Moderately suited to grass-legume hay; not suited to corn and alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.
- Rock fragments on the surface may restrict the operation of farm machinery and interfere with the emergence of seedlings.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.
- Rock fragments on the surface may restrict the operation of farm machinery.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4s
Virginia soil management group: O
Hydric soil: No

54D—Tate loam, 15 to 35 percent slopes, stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes, toeslopes, and lower backslopes
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Tate soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 6 inches—dark yellowish brown loam

Subsoil:
6 to 12 inches—brown sandy loam
12 to 27 inches—strong brown clay loam
27 to 47 inches—strong brown sandy clay loam

Substratum:
47 to 62 inches—strong brown sandy loam

Minor Components

Dissimilar components:
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil than the Tate soil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil than the Tate soil; on flood plains
- Craigsville soils, which have more rock fragments and less clay in the subsoil than the Tate soil; on flood plains

Similar components:
- Tate soils that have fewer stones or cobbles on the surface
- Braddock soils, which have more clay in the subsoil than the Tate soil; in similar landform positions
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Tate soil
- Greenlee soils, which have more rock fragments and less clay in the subsoil than the Tate soil; in similar landform positions
- Thunder soils, which have more rock fragments in the subsoil than the Tate soil and have a thicker or darker surface layer; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None

Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.01 to 0.10 percent subrounded stones
Parent material: Colluvium and/or alluvium derived from igneous and metamorphic rock

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: O
Hydric soil: No

54E—Tate loam, 35 to 55 percent slopes, stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes and lower backslopes
Size of areas: 5 to 200 acres
Shape of areas: Irregular

Map Unit Composition

Tate soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 6 inches—dark yellowish brown loam

Subsoil:
6 to 12 inches—brown sandy loam
12 to 27 inches—strong brown clay loam
27 to 47 inches—strong brown sandy clay loam

Substratum:
47 to 62 inches—strong brown sandy loam

Minor Components

Dissimilar components:
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil than the Tate soil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil than the Tate soil; on flood plains
- Craigsville soils, which have more rock fragments and less clay in the subsoil than the Tate soil; on flood plains

Similar components:
- Tate soils that have fewer stones or cobbles on the surface
- Braddock soils, which have more clay in the subsoil than the Tate soil; in similar landform positions
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Tate soil
- Greenlee soils, which have more rock fragments and less clay in the subsoil than the Tate soil; in similar landform positions
- Thunder soils, which have more rock fragments in the subsoil than the Tate soil and have a thicker or darker surface layer; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None

Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.01 to 0.10 percent subrounded stones
Parent material: Colluvium and/or alluvium derived from igneous and metamorphic rock

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: O
Hydric soil: No

55D—Tate loam, 7 to 35 percent slopes, extremely bouldery

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Coves, benches, and saddles on low mountains and foothills
Position on the landform: Footslopes, toeslopes, and lower backslopes
Size of areas: 5 to 150 acres
Shape of areas: Irregular

Map Unit Composition

Tate soil and similar inclusions: Typically 90 percent, ranging from about 85 to 95 percent

Typical Profile

Surface layer:
0 to 6 inches—dark yellowish brown loam

Subsoil:
6 to 12 inches—brown sandy loam
12 to 27 inches—strong brown clay loam
27 to 47 inches—strong brown sandy clay loam

Substratum:
47 to 62 inches—strong brown sandy loam

Minor Components

Dissimilar components:
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil than the Tate soil; on flood plains
- Hatboro soils, which are poorly drained and have less clay in the subsoil than the Tate soil; on flood plains
- Craigsville soils, which have more rock fragments and less clay in the subsoil than the Tate soil; on flood plains

Similar components:
- Tate soils that have fewer boulders or stones on the surface
- Braddock soils, which have more clay in the subsoil than the Tate soil; in similar landform positions
- Delanco soils, which are moderately well drained; in landform positions similar to those of the Tate soil
- Greenlee soils, which have more rock fragments and less clay in the subsoil than the Tate soil; in similar landform positions
- Thunder soils, which have more rock fragments in the subsoil than the Tate soil and have a thicker or darker surface layer; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 7.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None

Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 3.00 to 15.00 percent subrounded boulders
Parent material: Colluvium and/or alluvium derived from igneous and metamorphic rock

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to yellow-poplar and eastern white pine
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Because of the high amount of surface rock fragments, this soil is unsuited to mechanical site preparation for planting and seeding.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.
- The stickiness of the soil reduces the efficiency of mechanical planting equipment.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- The low soil strength is unfavorable for supporting heavy loads.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: O
Hydric soil: No

56C—Thunder cobbly loam, 2 to 15 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Benches, coves, and saddles on low mountains and foothills
Position on the landform: Footslopes and toeslopes
Size of areas: About 35 acres
Shape of areas: Irregular

Map Unit Composition

Thunder soil and similar inclusions: Typically 80 percent, ranging from about 75 to 85 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 5 inches—very dark gray cobbly loam
5 to 12 inches—dark brown very cobbly loam

Subsurface layer:
12 to 21 inches—brown very cobbly loam

Subsoil:
21 to 50 inches—yellowish brown very cobbly sandy clay loam
50 to 62 inches—yellowish brown extremely cobbly sandy loam

Minor Components

Dissimilar components:
- Thunder soils that have bouldery surfaces
- Soils that are poorly drained and have fewer rock fragments in the subsoil than the Thunder soil; in similar landform positions
- Soils that are somewhat poorly drained and have fewer rock fragments in the subsoil than the Thunder soil; in similar landform positions

Similar components:
- Thunder soils that have stony surfaces
- Tate soils, which have fewer rock fragments in the subsoil than the Thunder soil and have a thinner or lighter colored surface layer; in similar landform positions
- Cullasaja soils, which have less clay in the subsoil than the Thunder soil; in similar landform positions
- Soils that are moderately well drained; in landform positions similar to those of the Thunder soil
- Soils that have a dark surface layer that is thicker than that of the Thunder soil; in similar landform positions
- Soils that have a dark surface layer that is thinner than that of the Thunder soil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 6.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained

Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: None
Parent material: Colluvium derived from rhyolite

Use and Management Considerations

Cropland

Suitability: Moderately suited to grass-legume hay; poorly suited to corn; not suited to alfalfa hay
- The rate of surface runoff, the erosion hazard, and the amount of nutrient loss are increased because of the slope.

Pastureland

Suitability: Well suited
- The hazard of erosion, the rate of surface runoff, and the amount of nutrient loss are increased because of the slope.

Woodland

Suitability: Well suited to northern red oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 4s
Virginia soil management group: GG
Hydric soil: No

56D—Thunder cobbly loam, 15 to 35 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Benches, coves, and saddles on low mountains and foothills
Position on the landform: Footslopes, toeslopes, and lower backslopes
Size of areas: 5 to 75 acres
Shape of areas: Irregular

Map Unit Composition

Thunder soil and similar inclusions: Typically 80 percent, ranging from about 75 to 85 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 5 inches—very dark gray cobbly loam
5 to 12 inches—dark brown very cobbly loam

Subsurface layer:
12 to 21 inches—brown very cobbly loam

Subsoil:
21 to 50 inches—yellowish brown very cobbly sandy clay loam
50 to 62 inches—yellowish brown extremely cobbly sandy loam

Minor Components

Dissimilar components:
- Soils that are poorly drained and have fewer rock fragments in the subsoil than the Thunder soil; in similar landform positions
- Soils that are somewhat poorly drained and have fewer rock fragments in the subsoil than the Thunder soil; in similar landform positions

Similar components:
- Thunder soils that have stony or bouldery surfaces
- Tate soils, which have fewer rock fragments in the subsoil than the Thunder soil and have a thinner or lighter colored surface layer; in similar landform positions
- Cullasaja soils, which have less clay in the subsoil than the Thunder soil; in similar landform positions
- Soils that are moderately well drained; in landform positions similar to those of the Thunder soil
- Soils that have a dark surface layer that is thicker than that of the Thunder soil; in similar landform positions
- Soils that have a dark surface layer that is thinner than that of the Thunder soil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 6.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet

Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Colluvium derived from rhyolite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to northern red oak and yellow-poplar

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited

- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: GG
Hydric soil: No

56E—Thunder cobbly loam, 35 to 55 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Benches, coves, and saddles on low mountains and foothills
Position on the landform: Footslopes, toeslopes, and lower backslopes
Size of areas: 5 to 100 acres
Shape of areas: Irregular

Map Unit Composition

Thunder soil and similar inclusions: Typically 80 percent, ranging from about 75 to 85 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 5 inches—very dark gray cobbly loam
5 to 12 inches—dark brown very cobbly loam

Subsurface layer:
12 to 21 inches—brown very cobbly loam

Subsoil:
21 to 50 inches—yellowish brown very cobbly sandy clay loam
50 to 62 inches—yellowish brown extremely cobbly sandy loam

Minor Components

Dissimilar components:
- Soils that are poorly drained and have fewer rock fragments in the subsoil than the Thunder soil; in similar landform positions
- Soils that are somewhat poorly drained and have fewer rock fragments in the subsoil than the Thunder soil; in similar landform positions

Similar components:
- Thunder soils that have stony or bouldery surfaces
- Tate soils, which have fewer rock fragments in the subsoil than the Thunder soil and have a thinner or lighter colored surface layer; in similar landform positions
- Cullasaja soils, which have less clay in the subsoil than the Thunder soil; in similar landform positions
- Soils that are moderately well drained; in landform positions similar to those of the Thunder soil
- Soils that have a dark surface layer that is thicker than that of the Thunder soil; in similar landform positions
- Soils that have a dark surface layer that is thinner than that of the Thunder soil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 6.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet

Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: None
Parent material: Colluvium derived from rhyolite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to northern red oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: GG
Hydric soil: No

57C—Thunder cobbly loam, 2 to 15 percent slopes, very bouldery

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Benches, coves, and saddles on low mountains and foothills
Position on the landform: Footslopes and toeslopes
Size of areas: 5 to 35 acres
Shape of areas: Irregular

Map Unit Composition

Thunder soil and similar inclusions: Typically 80 percent, ranging from about 75 to 85 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 5 inches—very dark gray cobbly loam
5 to 12 inches—dark brown very cobbly loam

Subsurface layer:
12 to 21 inches—brown very cobbly loam

Subsoil:
21 to 50 inches—yellowish brown very cobbly sandy clay loam
50 to 62 inches—yellowish brown extremely cobbly sandy loam

Minor Components

Dissimilar components:
- Soils that are poorly drained and have fewer rock fragments in the subsoil than the Thunder soil; in similar landform positions
- Soils that are somewhat poorly drained and have fewer rock fragments in the subsoil than the Thunder soil; in similar landform positions
- Areas with rubbly surfaces; in landform positions similar to those of the Thunder soil

Similar components:
- Thunder soils that have fewer boulders or stones on the surface
- Tate soils, which have fewer rock fragments in the subsoil than the Thunder soil and have a thinner or lighter colored surface layer; in similar landform positions
- Soils that are moderately well drained; in landform positions similar to those of the Thunder soil
- Soils that have a dark surface layer that is thicker than that of the Thunder soil; in similar landform positions
- Soils that have a dark surface layer that is thinner than that of the Thunder soil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 6.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet

Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Medium
Surface fragments: About 0.10 to 3.00 percent subrounded boulders
Parent material: Colluvium derived from rhyolite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to northern red oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks.
- The slope may restrict the use of some mechanical planting equipment.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: GG
Hydric soil: No

57D—Thunder cobbly loam, 15 to 35 percent slopes, very bouldery

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Benches, coves, and saddles on low mountains and foothills
Position on the landform: Footslopes, toeslopes, and lower backslopes
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Thunder soil and similar inclusions: Typically 80 percent, ranging from about 75 to 85 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 5 inches—very dark gray cobbly loam
5 to 12 inches—dark brown very cobbly loam

Subsurface layer:
12 to 21 inches—brown very cobbly loam

Subsoil:
21 to 50 inches—yellowish brown very cobbly sandy clay loam
50 to 62 inches—yellowish brown extremely cobbly sandy loam

Minor Components

Dissimilar components:
- Soils that are poorly drained and have fewer rock fragments in the subsoil than the Thunder soil; in similar landform positions
- Soils that are somewhat poorly drained and have fewer rock fragments in the subsoil than the Thunder soil; in similar landform positions
- Areas with rubbly surfaces; in landform positions similar to those of the Thunder soil

Similar components:
- Thunder soils that have fewer boulders or stones on the surface
- Tate soils, which have fewer rock fragments in the subsoil than the Thunder soil and have a thinner or lighter colored surface layer; in similar landform positions
- Soils that are moderately well drained; in landform positions similar to those of the Thunder soil
- Soils that have a dark surface layer that is thicker than that of the Thunder soil; in similar landform positions
- Soils that have a dark surface layer that is thinner than that of the Thunder soil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 6.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet

Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.10 to 3.00 percent subrounded boulders
Parent material: Colluvium derived from rhyolite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to northern red oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- Because of the slope, the use of mechanical planting equipment is impractical.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- The low soil strength interferes with the construction of haul roads and log landings.
- The low soil strength may create unsafe conditions for log trucks.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: GG
Hydric soil: No

57E—Thunder cobbly loam, 35 to 55 percent slopes, very bouldery

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Benches, coves, and saddles on low mountains and foothills
Position on the landform: Footslopes and lower backslopes
Size of areas: 5 to 350 acres
Shape of areas: Irregular

Map Unit Composition

Thunder soil and similar inclusions: Typically 80 percent, ranging from about 75 to 85 percent

Typical Profile

Organic layer:
0 to 1 inch—moderately decomposed plant material

Surface layer:
1 to 5 inches—very dark gray cobbly loam
5 to 12 inches—dark brown very cobbly loam

Subsurface layer:
12 to 21 inches—brown very cobbly loam

Subsoil:
21 to 50 inches—yellowish brown very cobbly sandy clay loam
50 to 62 inches—yellowish brown extremely cobbly sandy loam

Minor Components

Dissimilar components:
- Soils that are poorly drained and have fewer rock fragments in the subsoil than the Thunder soil; in similar landform positions
- Soils that are somewhat poorly drained and have fewer rock fragments in the subsoil than the Thunder soil; in similar landform positions
- Areas with rubbly surfaces; in landform positions similar to those of the Thunder soil

Similar components:
- Thunder soils that have fewer boulders or stones on the surface
- Tate soils, which have fewer rock fragments in the subsoil than the Thunder soil and have a thinner or lighter colored surface layer; in similar landform positions
- Soils that are moderately well drained; in landform positions similar to those of the Thunder soil
- Soils that have a dark surface layer that is thicker than that of the Thunder soil; in similar landform positions
- Soils that have a dark surface layer that is thinner than that of the Thunder soil; in similar landform positions

Soil Properties and Qualities

Available water capacity: Moderate (about 6.7 inches)
Slowest saturated hydraulic conductivity: Moderately high (about 0.57 in/hr)
Depth class: Very deep (more than 60 inches)
Depth to root-restrictive feature: More than 60 inches
Drainage class: Well drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: High
Surface fragments: About 0.10 to 3.00 percent subrounded boulders
Parent material: Colluvium derived from rhyolite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Well suited to northern red oak and yellow-poplar
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers increase the maintenance of haul roads and log landings.
- The low soil strength interferes with the construction of haul roads and log landings.

Christmas trees

Suitability: Well suited
- Planting should be avoided in concave depressional areas, seeps, and drainageways.

Building sites

- The slope influences the use of machinery and the amount of excavation required.

Septic tank absorption fields

- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: GG
Hydric soil: No

58D—Udorthents-Urban land complex, 0 to 25 percent slopes

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and hills on low mountains and foothills; stream terraces and flood plains in valleys
Position on the landform: Summits, shoulders, and backslopes on ridges and hills; treads and risers on stream terraces; steps and channels on flood plains
Size of areas: 5 to 300 acres
Shape of areas: Variable; depending on ownership boundaries

Map Unit Composition

Udorthents: Typically 50 percent, ranging from about 45 to 55 percent
Urban land: Typically 35 percent, ranging from about 30 to 40 percent

Typical Profile

Udorthents

Udorthents have resulted from disturbance of soil by land leveling, excavation, or filling. They consist of loamy and clayey soil material and varying amounts of rock fragments. Depth to hard bedrock varies from a few inches to more than 5 feet. Areas range from severely compacted to slightly compacted. Drainage is variable. Because of the variability of the soil material, a typical profile is not given.

Urban land

Urban land consists of areas covered by highways, streets, parking lots, buildings, and other impervious surfaces.

Use and Management Considerations

Onsite investigation is needed to determine the suitability of any area for specific uses.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: Udorthents—none assigned; Urban land—8
Virginia soil management group: None assigned
Hydric soils: Not rated

59D—Unicoi very gravelly sandy loam, 7 to 35 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Summits, shoulders, and moderately steep backslopes
Size of areas: 5 to 250 acres
Shape of areas: Irregular

Map Unit Composition

Unicoi soil and similar inclusions: Typically 85 percent, ranging from about 80 to 95 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 5 inches—brown very gravelly sandy loam

Subsoil:
5 to 14 inches—yellowish brown very gravelly sandy loam

Substratum:
14 to 19 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
19 inches—bedrock

Minor Components

Dissimilar components:
- Sylco soils, which are well drained, are moderately deep to hard bedrock, and have more silt in the subsoil than the Unicoi soil; in similar landform positions
- Sylvatus soils, which are well drained and have more silt in the subsoil than the Unicoi soil; in similar landform positions
- McCamy soils, which are well drained, moderately deep to hard bedrock, and have more clay and fewer rock fragments in the subsoil than the Unicoi soil; in similar landform positions
- Keener soils, which are well drained, are very deep to bedrock, and have more clay and fewer rock fragments in the subsoil than the Unicoi soil; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in landform positions similar to those of the Unicoi soil

Similar components:
- Unicoi soils that have fewer stones or cobbles on the surface
- Soils that are moderately deep to hard bedrock; in landform positions similar to those of the Unicoi soil

Soil Properties and Qualities

Available water capacity: Very low (about 0.9 inch)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Shallow (10 to 20 inches)
Depth to root-restrictive feature: 10 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained

Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 3.00 to 15.00 percent subrounded stones
Parent material: Residuum weathered from metasandstone and/or quartzite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to chestnut oak

- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality. A timber harvest plan should include general adherence to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for preparing sites for planting and seeding is restricted.
- The slope may restrict the use of some mechanical planting equipment.
- Bedrock may interfere with the construction of haul roads and log landings.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.
- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.

- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7s
Virginia soil management group: JJ
Hydric soil: No

59E—Unicoi very gravelly sandy loam, 35 to 55 percent slopes, extremely stony

Setting

Major land resource area: Blue Ridge (MLRA 130)
Landform: Ridges and knobs on low mountains and foothills
Position on the landform: Backslopes and steep shoulders and summits
Size of areas: 5 to 500 acres
Shape of areas: Irregular

Map Unit Composition

Unicoi soil and similar inclusions: Typically 85 percent, ranging from about 80 to 95 percent

Typical Profile

Organic layer:
0 to 2 inches—moderately decomposed plant material

Surface layer:
2 to 5 inches—brown very gravelly sandy loam

Subsoil:
5 to 14 inches—yellowish brown very gravelly sandy loam

Substratum:
14 to 19 inches—yellowish brown extremely gravelly sandy loam

Hard bedrock:
19 inches—bedrock

Minor Components

Dissimilar components:
- Sylco soils, which are well drained, are moderately deep to hard bedrock, and have more silt in the subsoil than the Unicoi soil; in similar landform positions
- Sylvatus soils, which are well drained and have more silt in the subsoil than the Unicoi soil; in similar landform positions
- McCamy soils, which are well drained, are moderately deep to hard bedrock, and have more clay and fewer rock fragments in the subsoil than the Unicoi soil; in similar landform positions

- Keener soils, which are well drained, are very deep to bedrock, and have more clay and fewer rock fragments in the subsoil than the Unicoi soil; on footslopes, toeslopes, and lower backslopes
- Rock outcrops in landform positions similar to those of the Unicoi soil

Similar components:
- Unicoi soils that have fewer stones or cobbles on the surface
- Soils that are moderately deep to hard bedrock; in landform positions similar to those of the Unicoi soil

Soil Properties and Qualities

Available water capacity: Very low (about 0.9 inch)
Slowest saturated hydraulic conductivity: High (about 1.98 in/hr)
Depth class: Shallow (10 to 20 inches)
Depth to root-restrictive feature: 10 to 20 inches to bedrock (lithic)
Drainage class: Somewhat excessively drained
Depth to seasonal water saturation: More than 6 feet
Flooding hazard: None
Ponding hazard: None
Shrink-swell potential: Low
Runoff class: Very high
Surface fragments: About 3.00 to 15.00 percent subrounded stones
Parent material: Residuum weathered from metasandstone and/or quartzite

Use and Management Considerations

Cropland

- This soil is unsuited to cropland.

Pastureland

- This soil is unsuited to pastureland.

Woodland

Suitability: Moderately suited to chestnut oak
- Proper planning for timber harvesting is essential in minimizing the potential negative impact to soil and water quality, especially in areas on steeper slopes. A timber harvest plan should focus on the proper location of haul roads and skid trails, and careful attention should be given to all applicable best management practices.
- The slope poses safety hazards and creates a potential for erosion during the construction of haul roads and log landings.
- The slope creates unsafe operating conditions and reduces the operating efficiency of log trucks and harvesting equipment.
- Because of the slope, the use of equipment for planting and seeding is impractical.
- The high content of stones or boulders on the surface may obstruct the construction of haul roads and log landings.
- The amount of rock fragments on the surface may reduce the traction of wheeled harvest equipment.
- Rock fragments on the surface interfere with the use of site preparation equipment.
- The use of mechanical planting equipment is impractical because of the content of rock fragments.
- Rock fragments restrict the use of equipment during site preparation for planting or seeding.
- Coarse textured soil layers may slough, thus reducing the efficiency of mechanical planting equipment.

- The coarseness of the soil material may reduce the traction of wheeled harvest equipment and log trucks.

Christmas trees

- This soil is unsuited to Christmas trees.

Building sites

- The slope influences the use of machinery and the amount of excavation required.
- Because of the limited depth to bedrock, the ease of excavation is greatly reduced and the difficulty in constructing foundations and installing utilities is increased.

Septic tank absorption fields

- The restricted permeability limits the absorption and proper treatment of the effluent from conventional septic systems.
- Because of the limited depth to bedrock, the filtering capacity of the soil is reduced and the difficulty of properly installing the effluent distribution lines is increased.
- The slope limits the proper treatment of effluent from conventional septic systems.

Local roads and streets

- Because of the limited depth to bedrock, the ease of excavation is reduced and the difficulty of constructing roads is increased.
- Because of the slope, designing local roads and streets is difficult.

Interpretive Groups

Prime farmland: Not prime farmland
Land capability class: 7e
Virginia soil management group: JJ
Hydric soil: No

W—Water

This map unit is in the Blue Ridge Major Land Resource Area (MLRA 130). It includes streams, rivers, lakes, and ponds or other areas that are covered with water most of the time.

This map unit is not assigned any interpretive groups.

Use and Management of the Soils

This soil survey is an inventory and evaluation of the soils in the survey area. It can be used to adjust land uses to the limitations and potentials of natural resources and the environment. Also, it can help to prevent soil-related failures in land uses.

In preparing a soil survey, soil scientists, conservationists, engineers, and others collect extensive field data about the nature and behavioral characteristics of the soils. They collect data on erosion, droughtiness, flooding, and other factors that affect various soil uses and management. Field experience and collected data on soil properties and performance are used as a basis in predicting soil behavior.

Information in this section can be used to plan the use and management of soils for crops and pasture; as forestland; as sites for buildings, sanitary facilities, highways and other transportation systems, and parks and other recreational facilities; and for agricultural waste management. It can be used to identify the potentials and limitations of each soil for specific land uses and to help prevent construction failures caused by unfavorable soil properties.

Planners and others using soil survey information can evaluate the effect of specific land uses on productivity and on the environment in all or part of the survey area. The survey can help planners to maintain or create a land use pattern in harmony with the natural soil.

Contractors can use this survey to locate sources of gravel, sand, reclamation material, roadfill, and topsoil. They can use it to identify areas where bedrock, wetness, or very firm soil layers can cause difficulty in excavation.

Health officials, highway officials, engineers, and others may also find this survey useful. The survey can help them plan the safe disposal of wastes and locate sites for pavements, sidewalks, campgrounds, playgrounds, lawns, and trees and shrubs.

Interpretive Ratings

The interpretive tables in this survey rate the soils in the survey area for various uses. Many of the tables identify the limitations that affect specified uses and indicate the severity of those limitations. The ratings in these tables are both verbal and numerical.

Rating Class Terms

Rating classes are expressed in the tables in terms that indicate the extent to which the soils are limited by all of the soil features that affect a specified use or in terms that indicate the suitability of the soils for the use. Thus, the tables may show limitation classes or suitability classes. Terms for the limitation classes are *not limited, somewhat limited,* and *very limited*. The suitability ratings are expressed as *well suited, moderately suited, poorly suited,* and *unsuited* or as *good, fair,* and *poor*.

Numerical Ratings

Numerical ratings in the tables indicate the relative severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate

gradations between the point at which a soil feature has the greatest negative impact on the use and the point at which the soil feature is not a limitation. The limitations appear in order from the most limiting to the least limiting. Thus, if more than one limitation is identified, the most severe limitation is listed first and the least severe one is listed last.

Crops and Pasture

Fred Rogers, District Conservationist, Natural Resources Conservation Service, helped prepare this section.

General management needed for crops and pasture is suggested in this section. The estimated yields of the main crops and pasture plants are listed, and the system of land capability classification used by the Natural Resources Conservation Service is explained.

Effective pasture management practices include maintaining a mixture of grasses and legumes, rotating pasture, deferring grazing, controlling undesirable vegetation, and using proper stocking rates.

Planners of management systems for individual fields or farms should consider the detailed information given in the description of each soil under the heading “Detailed Soil Map Units.” Specific information can be obtained from the local office of the Natural Resources Conservation Service or the Cooperative Extension Service.

The farms in Grayson County have decreased in number and increased in size since 1960. Livestock and forage production are the main sources of income on these farms. The main types of livestock are beef and dairy cattle. Other types include hogs and sheep. The main forage crops are mixed grass-legume hay and alfalfa hay. Corn is grown mainly for silage. Grain and specialty crops are grown in small areas. Grain crops include corn, oats, and wheat. Specialty crops include Christmas trees, tobacco, and cabbage.

Soil and water conservation practices are necessary on almost all of the cropland in the county. The most common conservation practices are conservation tillage, stripcropping, crop rotations that include grasses and legumes, winter cover crops, grassed waterways, and diversions. The most common system of conservation tillage is no-till planting. Rye is the primary cover crop in areas where no-till corn is grown.

The slope, stoniness, and depth to bedrock limit many areas to less intensive uses, such as hay and pasture. Grass-clover hay is the primary hay crop, but alfalfa has made a comeback since the early 1960’s when it was almost eliminated by the alfalfa weevil. No-till alfalfa has been particularly successful. The grasses grown for hay in the county are mainly orchardgrass and fescue mixed with red clover. The pastures dominantly support cool-season grasses, such as orchardgrass and fescue. Pastures in areas where access to farm machinery is limited tend to support fescue.

Many farmers use their grassland for both hay and pasture. This dual use is most common in areas where fescue is stockpiled for winter grazing. One or two hay cuttings are made in the spring and summer, additional nitrogen fertilizer is applied in August, and cattle graze the accumulated growth during the winter. Another common dual use is one in which cattle are allowed to graze the regrowth after a first cutting of orchardgrass.

Yields per Acre

The average yields per acre that can be expected of the principal crops under a high level of management are shown in table 5. In any given year, yields may be higher or lower than those indicated in the table because of variations in rainfall and other climatic factors. The land capability classification and the Virginia Soil Management Group of map units in the survey area also are shown in the table.

The yields are based on the Virginia Agronomic Land Evaluation System (VALUES) *(20)*. Available yield data from nearby counties and results of field trials and demonstrations also are considered.

The management needed to obtain the indicated yields of the various crops depends on the kind of soil and the crop. Management can include erosion control and protection from flooding; the proper planting and seeding rates; suitable high-yielding crop varieties; appropriate and timely tillage; control of weeds, plant diseases, and harmful insects; favorable soil reaction and optimum levels of nitrogen, phosphorus, potassium, and trace elements for each crop; effective use of crop residue, barnyard manure, and green manure crops; and harvesting that ensures the smallest possible loss.

Realistic yield goals can be maintained over a long-term basis through proper nutrient management and other soil amendments such as lime. Applications of nitrogen and phosphorus from organic or inorganic forms should be in keeping with approved nutrient management practices and regulations.

Pasture yields are expressed in terms of animal unit months. An animal unit month (AUM) is the amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

The estimated yields reflect the productive capacity of each soil for each of the principal crops. Yields are likely to increase as new production technology is developed. The productivity of a given soil compared with that of other soils, however, is not likely to change.

Crops other than those shown in table 5 are grown in the survey area, but estimated yields are not listed because the acreage of such crops is small. The local office of the Natural Resources Conservation Service or of the Cooperative Extension Service can provide information about the management and productivity of the soils for those crops.

Land Capability Classification

Land capability classification shows, in a general way, the suitability of soils for most kinds of field crops. Crops that require special management are excluded. The soils are grouped according to their limitations for field crops, the risk of damage if they are used for crops, and the way they respond to management. The criteria used in grouping the soils do not include major and generally expensive landforming that would change slope, depth, or other characteristics of the soils, nor do they include possible but unlikely major reclamation projects. Capability classification is not a substitute for interpretations designed to show suitability and limitations of groups of soils for forestland or for engineering purposes.

In the capability system, soils are generally grouped at two levels—capability class and subclass *(16)*.

Capability classes, the broadest groups, are designated by the numbers 1 through 8. The numbers indicate progressively greater limitations and narrower choices for practical use. The classes are defined as follows:

Class 1 soils have slight limitations that restrict their use.

Class 2 soils have moderate limitations that restrict the choice of plants or that require moderate conservation practices.

Class 3 soils have severe limitations that restrict the choice of plants or that require special conservation practices, or both.

Class 4 soils have very severe limitations that restrict the choice of plants or that require very careful management, or both.

Class 5 soils are subject to little or no erosion but have other limitations, impractical to remove, that restrict their use mainly to pasture, forestland, or wildlife habitat.

Class 6 soils have severe limitations that make them generally unsuitable for cultivation and that restrict their use mainly to pasture, forestland, or wildlife habitat.

Class 7 soils have very severe limitations that make them unsuitable for cultivation and that restrict their use mainly to grazing, forestland, or wildlife habitat.

Class 8 soils and miscellaneous areas have limitations that preclude commercial plant production and that restrict their use to recreational purposes, wildlife habitat, watershed, or esthetic purposes.

Capability subclasses are soil groups within one class. They are designated by adding a small letter, *e, w, s,* or *c,* to the class numeral, for example, 2e. The letter *e* shows that the main hazard is the risk of erosion unless close-growing plant cover is maintained; *w* shows that water in or on the soil interferes with plant growth or cultivation (in some soils the wetness can be partly corrected by artificial drainage); *s* shows that the soil is limited mainly because it is shallow, droughty, or stony; and *c,* used in only some parts of the United States, shows that the chief limitation is climate that is very cold or very dry.

In class 1 there are no subclasses because the soils of this class have few limitations. Class 5 contains only the subclasses indicated by *w, s,* or *c* because the soils in class 5 are subject to little or no erosion. They have other limitations that restrict their use to pasture, forestland, wildlife habitat, or recreation.

The capability classification of the soils in this survey area is given in the section “Detailed Soil Map Units” and in table 5.

Virginia Soil Management Groups

The Virginia Agronomic Land Use Evaluation System (VALUES) is a system that ranks soils for management and productivity *(20)*. Developed by Virginia Tech, VALUES places each soil series in Virginia into one of 43 management groups. The format of the management groups, A through QQ, include the following soil characteristics—regional occurrence; parent material; landscape position or influence; solum thickness; dominant profile features, such as texture; available water capacity for plants; and internal soil drainage. Yields that are both economically and environmentally feasible were assigned to each management group, based on yields of field trial crop data and research. The following paragraphs describe the soil management groups in Grayson County.

Group A. The soils in this group formed in alluvial parent materials. These soils are on nearly level or gently sloping landscapes on flood plains or stream terraces. They are deep or very deep, are medium textured throughout, have a high available water capacity, and are well drained.

Group B. The soils in this group formed in alluvium or colluvium, generally associated with stream terraces or base of slopes. These soils are very deep, have loamy textures throughout, have a high available water capacity, and are well drained or moderately well drained.

Group G. The soils in this group formed in locally transported, medium textured sediments of either colluvial or alluvial origin that overlay a wide range of residual materials. These soils are in landscape positions ranging from footslopes and toeslopes to the heads of drainageways, depressions, narrow upland drainageways, and stream terraces. They are deep or very deep and have silty to loamy upper subsoils that are underlain with clayey to stony materials. They have a moderately high available water capacity and are moderately well drained or somewhat poorly drained.

Group L. The soils in this group formed from old transported deposits of alluvium, colluvium, or residuum from gneiss, schist, or granite. These soils are common on stream terraces, footslopes, and older, elevated, upland landscapes that were once stream terraces. They are deep or very deep, have a medium textured surface layer,

have more clayey subsurface layers, and commonly have gravel and rounded stones. They have a moderate or high available water capacity and typically are well drained.

Group N. The soils in this group formed from residuum ranging from weathered mafic rock to Triassic sediments, gneiss, and schist. These soils are very deep to moderately deep, have medium textured surface layers with reddish brown clayey subsurface layers, have a moderate available water capacity, and are well drained.

Group O. The soils in this group formed from transported materials ranging from mountain colluvium to old alluvium on dissected uplands and old elevated river terrace deposits. These soils range from very deep to shallow, have brown loamy to very dark red clayey subsurface horizons, may have significant coarse fragments in some areas, have a moderate available water capacity, and are well drained.

Group U. The soils in this group formed from a variety of residual parent materials, ranging from Triassic sediments to gneiss, schist, granite, metagraywacke, or phylitte to colluvium from these materials. These soils are very deep to shallow and commonly have fine-loamy subsurface textures. They are commonly as much as one-third coarse fragments, by volume, and, as a result, have a moderate or moderately low available water capacity. They are well drained or moderately well drained.

Group X. The soils in this group formed from a variety of residual materials, including slates, granites, gneisses, and schists. These soils are very deep to moderately deep, have clayey subsurface horizons (with coarse fragments or gravel in some areas), have a moderate available water capacity, and are well drained or moderately well drained.

Group CC. The soils in this group formed from a range of parent materials, including alluvium, colluvium, and loamy saprolites. These soils are represented by a variety of landscapes, including uplands, stream terraces, colluvial positions, and bottom lands. They commonly have a moderately deep solum, are very deep to bedrock, have clayey-skeletal to coarse-loamy subsurface horizons (some with as much as 70 percent coarse fragments), and have a moderately low available water capacity. They are well drained.

Group FF. The soils in this group formed in residual parent materials which weathered from slate, loamy granitic saprolites, metasandstone, phyllite, or mountain colluvium. These soils are on steeply dissected uplands and mountain side slopes. They are moderately shallow and mostly have loamy-skeletal subsurface horizons that may contain 80 percent or more coarse fragments. As a result, the available water capacity is low or very low. The soils are well drained or moderately well drained.

Group GG. The soils in this group formed from coarse textured residuum. These soils are on upland positions and are very deep to moderately deep. They have loamy-skeletal subsurface horizons, typically with more than 60 percent coarse fragments, or are otherwise coarse textured. They have a low available water capacity and are well drained.

Group HH. The soils in this group formed from loamy sediments on flood plains. These soils are moderately deep or deeper, have fine-loamy or clayey subsurface textures, have a moderate available water capacity, and range from somewhat poorly drained to moderately well drained.

Group JJ. The soils in this group formed from residual parent materials which weathered from granite saprolites, rhythmite, tillite, metasandstone, quartzite, gneiss, rhyolite, granite, phyllites, or schists. These soils are shallow to moderately deep and dominantly have loamy-skeletal textures throughout (ranging from 30 to 70 percent coarse fragments). They have a very low available water capacity and are well drained.

Group OO. The soils in this group are undrained. These soils formed from alluvium or other sediments on terraces, levees, and broad, nearly level landscapes. They have fine, loamy to silty textures throughout, have a high available water capacity, and are poorly drained.

The management groups for the map units in the survey area are given in the section “Detailed Soil Map Units” and in table 5.

Prime Farmland

Table 6 lists the map units in the survey area that are considered prime farmland. This list does not constitute a recommendation for a particular land use.

In an effort to identify the extent and location of important farmlands, the Natural Resources Conservation Service, in cooperation with other interested Federal, State, and local government organizations, has inventoried land that can be used for the production of the Nation’s food supply.

Prime farmland is of major importance in meeting the Nation’s short- and long-range needs for food and fiber. Because the supply of high-quality farmland is limited, the U.S. Department of Agriculture recognizes that responsible levels of government, as well as individuals, should encourage and facilitate the wise use of our Nation’s prime farmland.

Prime farmland, as defined by the U.S. Department of Agriculture, is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops and is available for these uses. It could be cultivated land, pastureland, forestland, or other land, but it is not urban or built-up land or water areas. The soil quality, growing season, and moisture supply are those needed for the soil to economically produce sustained high yields of crops when proper management, including water management, and acceptable farming methods are applied. In general, prime farmland has an adequate and dependable supply of moisture from precipitation or irrigation, a favorable temperature and growing season, acceptable acidity or alkalinity, an acceptable salt and sodium content, and few or no rocks. The water supply is dependable and of adequate quality. Prime farmland is permeable to water and air. It is not excessively erodible or saturated with water for long periods, and it either is not frequently flooded during the growing season or is protected from flooding. Slope ranges mainly from 0 to 6 percent. More detailed information about the criteria for prime farmland is available at the local office of the Natural Resources Conservation Service.

A recent trend in land use in some areas has been the loss of some prime farmland to industrial and urban uses. The loss of prime farmland to other uses puts pressure on marginal lands, which generally are more erodible, droughty, and less productive and cannot be easily cultivated.

For some soils identified in the table as prime farmland, measures that overcome a hazard or limitation, such as flooding, wetness, and droughtiness, are needed. Onsite evaluation is needed to determine whether or not the hazard or limitation has been overcome by corrective measures.

Hydric Soils

This section lists the map unit components that are rated as hydric soils in the survey area. This list can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site *(6, 8)*.

The three essential characteristics of wetlands are hydrophytic vegetation, hydric soils, and wetland hydrology *(3, 8, 9, 10)*. Criteria for all of the characteristics must be met for areas to be identified as wetlands. Undrained hydric soils that have natural vegetation should support a dominant population of ecological wetland plant species. Hydric soils that have been converted to other uses should be capable of being restored to wetlands.

Hydric soils are defined by the National Technical Committee for Hydric Soils (NTCHS) as soils that formed under conditions of saturation, flooding, or ponding long

enough during the growing season to develop anaerobic conditions in the upper part *(4)*. These soils, under natural conditions, are either saturated or inundated long enough during the growing season to support the growth and reproduction of hydrophytic vegetation.

The NTCHS definition identifies general soil properties that are associated with wetness. In order to determine whether a specific soil is a hydric soil or nonhydric soil, however, more specific information, such as information about the depth and duration of the water table, is needed. Thus, criteria that identify those estimated soil properties unique to hydric soils have been established *(5)*. These criteria are used to identify map unit components that normally are associated with wetlands. The criteria used are selected estimated soil properties that are described in “Soil Taxonomy” *(13)* and “Keys to Soil Taxonomy” *(15)* and in the “Soil Survey Manual” *(17)*.

If soils are wet enough for a long enough period of time to be considered hydric, they should exhibit certain properties that can be easily observed in the field. These visible properties are indicators of hydric soils. The indicators used to make onsite determinations of hydric soils are specified in “Field Indicators of Hydric Soils in the United States” *(6)*.

Hydric soils are identified by examining and describing the soil to a depth of about 20 inches. This depth may be greater if determination of an appropriate indicator so requires. It is always recommended that soils be excavated and described to the depth necessary for an understanding of the redoximorphic processes. Then, using the completed soil descriptions, soil scientists can compare the soil features required by each indicator and specify which indicators have been matched with the conditions observed in the soil. The soil can be identified as a hydric soil if at least one of the approved indicators is present.

The following map units, or a portion of the map unit, meet the definition of hydric soils and, in addition, have at least one of the hydric soil indicators. This information can help in planning land uses; however, onsite investigation is recommended to determine the hydric soils on a specific site *(6, 8)*.

2D Balsam-Nopan complex, 15 to 35 percent slopes, very bouldery (only Nopan component is hydric)
2E Balsam-Nopan complex, 35 to 55 percent slopes, very bouldery (only Nopan component is hydric)
32A Hatboro sandy loam, 0 to 3 percent slopes, frequently flooded
36A Kinkora fine sandy loam, 0 to 3 percent slopes, rarely flooded
51B Scales mucky peak, 0 to 7 percent slopes, very bouldery

Map units that are dominantly made up of hydric soils may have small areas, or inclusions, of nonhydric soils in the higher positions on the landform, and map units dominantly made up of nonhydric soils may have inclusions of hydric soils in the lower positions on the landform.

The following map units, in general, do not meet the definition of hydric soils because they do not have one of the hydric soil indicators. A portion of these map units, however, may include hydric soils. Onsite investigation is recommended to determine whether hydric soils occur and the location of the included hydric soils.

1C Balsam cobbly loam, 2 to 15 percent slopes, very bouldery
1D Balsam cobbly loam, 15 to 35 percent slopes, very bouldery
1E Balsam cobbly loam, 35 to 55 percent slopes, very bouldery
12A Codorus loam, 0 to 3 percent slopes, frequently flooded
13A Comus fine sandy loam, 0 to 3 percent slopes, frequently flooded
17A Craigsville cobbly sandy loam, 0 to 3 percent slopes, frequently flooded
19A Delanco fine sandy loam, 0 to 2 percent slopes, rarely flooded
19B Delanco fine sandy loam, 2 to 7 percent slopes, rarely flooded
20C Delanco fine sandy loam, 7 to 15 percent slopes

25B	Elsinboro fine sandy loam, 2 to 7 percent slopes, rarely flooded
26B	Elsinboro-Urban land complex, 0 to 7 percent slopes, rarely flooded
40D	Mt Rogers-Bloodyhorse-Rock outcrop complex, 7 to 35 percent slopes, rubbly, windswept
40F	Mt Rogers-Bloodyhorse-Rock outcrop complex, 35 to 80 percent slopes, rubbly, windswept
41C	Mt Rogers-Buzzrock complex, 7 to 15 percent slopes, very bouldery, windswept
41D	Mt Rogers-Buzzrock complex, 15 to 35 percent slopes, very bouldery, windswept
53B	Tate loam, 2 to 7 percent slopes
53C	Tate loam, 7 to 15 percent slopes
53D	Tate loam, 15 to 25 percent slopes
53E	Tate loam, 25 to 35 percent slopes
54C	Tate loam, 7 to 15 percent slopes, stony
54D	Tate loam, 15 to 35 percent slopes, stony
54E	Tate loam, 35 to 55 percent slopes, stony
55D	Tate loam, 7 to 35 percent slopes, extremely bouldery

Agricultural Waste Management

Soil properties are important considerations in areas where soils are used as sites for the treatment and disposal of organic waste and wastewater. Selection of soils with properties that favor waste management can help to prevent environmental damage.

Table 7, parts I, II, and III, show the degree and kind of soil limitations affecting the treatment of agricultural waste, including municipal and food-processing wastewater and effluent from lagoons or storage ponds. Municipal wastewater is the waste stream from a municipality. It contains domestic waste and may contain industrial waste. It may have received primary or secondary treatment. It is rarely untreated sewage. Food-processing wastewater results from the preparation of fruits, vegetables, milk, cheese, and meats for public consumption. In places it is high in content of sodium and chloride. In the context of this table, the effluent in lagoons and storage ponds is from facilities used to treat or store food-processing wastewater or domestic or animal waste. Domestic and food-processing wastewater is very dilute, and the effluent from the facilities that treat or store it commonly is very low in content of carbonaceous and nitrogenous material; the content of nitrogen commonly ranges from 10 to 30 milligrams per liter. The wastewater from animal waste treatment lagoons or storage ponds, however, has much higher concentrations of these materials, mainly because the manure has not been diluted as much as the domestic waste. The content of nitrogen in this wastewater generally ranges from 50 to 2,000 milligrams per liter. When wastewater is applied, checks should be made to ensure that nitrogen, heavy metals, and salts are not added in excessive amounts.

The ratings in the table are for waste management systems that not only dispose of and treat organic waste or wastewater but also are beneficial to crops (application of manure and food-processing waste, application of sewage sludge, and disposal of wastewater by irrigation) and for waste management systems that are designed only for the purpose of wastewater disposal and treatment (overland flow of wastewater, rapid infiltration of wastewater, and slow rate treatment of wastewater).

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect agricultural waste management. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning,

design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Application of manure and food-processing waste not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. Manure is the excrement of livestock and poultry, and food-processing waste is damaged fruit and vegetables and the peelings, stems, leaves, pits, and soil particles removed in food preparation. The manure and food-processing waste are either solid, slurry, or liquid. Their nitrogen content varies. A high content of nitrogen limits the application rate. Toxic or otherwise dangerous wastes, such as those mixed with the lye used in food processing, are not considered in the ratings.

The ratings are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the waste is applied, and the method by which the waste is applied. The properties that affect absorption include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, and available water capacity. The properties that affect plant growth and microbial activity include reaction, the sodium adsorption ratio, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Application of sewage sludge not only disposes of waste material but also can improve crop production by increasing the supply of nutrients in the soils where the material is applied. In the context of this table, sewage sludge is the residual product of the treatment of municipal sewage. The solid component consists mainly of cell mass, primarily bacteria cells that developed during secondary treatment and have incorporated soluble organics into their own bodies. The sludge has small amounts of sand, silt, and other solid debris. The content of nitrogen varies. Some sludge has constituents that are toxic to plants or hazardous to the food chain, such as heavy metals and exotic organic compounds, and should be analyzed chemically prior to use.

The content of water in the sludge ranges from about 98 percent to less than 40 percent. The sludge is considered liquid if it is more than about 90 percent water, slurry if it is about 50 to 90 percent water, and solid if it is less than about 50 percent water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, the rate at which the sludge is applied, and the method by which the sludge is applied. The properties that affect absorption, plant growth, and microbial activity include permeability, depth to a water table, ponding, the sodium adsorption ratio, depth to bedrock or a cemented pan, available water capacity, reaction, salinity, and bulk density. The wind erodibility group, the soil erodibility factor K, and slope are considered in estimating the likelihood that wind erosion or water erosion will transport the waste material from the application site. Stones, cobbles, a water table, ponding, and flooding can hinder the application of sludge. Permanently frozen soils are unsuitable for waste treatment.

Disposal of wastewater by irrigation not only disposes of municipal wastewater and

wastewater from food-processing plants, lagoons, and storage ponds but also can improve crop production by increasing the amount of water available to crops. The ratings in the table are based on the soil properties that affect the design, construction, management, and performance of the irrigation system. The properties that affect design and management include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, slope, and flooding. The properties that affect construction include stones, cobbles, depth to bedrock or a cemented pan, depth to a water table, and ponding. The properties that affect performance include depth to bedrock or a cemented pan, bulk density, the sodium adsorption ratio, salinity, reaction, and the cation-exchange capacity, which is used to estimate the capacity of a soil to adsorb heavy metals. Permanently frozen soils are not suitable for disposal of wastewater by irrigation.

Overland flow of wastewater is a process in which wastewater is applied to the upper reaches of sloped land and allowed to flow across vegetated surfaces, sometimes called terraces, to runoff-collection ditches. The length of the run generally is 150 to 300 feet. The application rate ranges from 2.5 to 16.0 inches per week. It commonly exceeds the rate needed for irrigation of cropland. The wastewater leaves solids and nutrients on the vegetated surfaces as it flows downslope in a thin film. Most of the water reaches the collection ditch, some is lost through evapotranspiration, and a small amount may percolate to the ground water.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, and the design and construction of the system. Reaction and the cation-exchange capacity affect absorption. Reaction, salinity, and the sodium adsorption ratio affect plant growth and microbial activity. Slope, permeability, depth to a water table, ponding, flooding, depth to bedrock or a cemented pan, stones, and cobbles affect design and construction. Permanently frozen soils are unsuitable for waste treatment.

Rapid infiltration of wastewater is a process in which wastewater applied in a level basin at a rate of 4 to 120 inches per week percolates through the soil. The wastewater may eventually reach the ground water. The application rate commonly exceeds the rate needed for irrigation of cropland. Vegetation is not a necessary part of the treatment; hence, the basins may or may not be vegetated. The thickness of the soil material needed for proper treatment of the wastewater is more than 72 inches. As a result, geologic and hydrologic investigation is needed to ensure proper design and performance and to determine the risk of ground-water pollution.

The ratings in the table are based on the soil properties that affect the risk of pollution and the design, construction, and performance of the system. Depth to a water table, ponding, flooding, and depth to bedrock or a cemented pan affect the risk of pollution and the design and construction of the system. Slope, stones, and cobbles also affect design and construction. Permeability and reaction affect performance. Permanently frozen soils are unsuitable for waste treatment.

Slow rate treatment of wastewater is a process in which wastewater is applied to land at a rate normally between 0.5 inch and 4.0 inches per week. The application rate commonly exceeds the rate needed for irrigation of cropland. The applied wastewater is treated as it moves through the soil. Much of the treated water may percolate to the ground water, and some enters the atmosphere through evapotranspiration. The applied water generally is not allowed to run off the surface. Waterlogging is prevented either through control of the application rate or through the use of tile drains, or both.

The ratings in the table are based on the soil properties that affect absorption, plant growth, microbial activity, erodibility, and the application of waste. The properties that affect absorption include the sodium adsorption ratio, depth to a water table, ponding, available water capacity, permeability, depth to bedrock or a cemented pan, reaction, the cation-exchange capacity, and slope. Reaction, the sodium adsorption ratio, salinity, and bulk density affect plant growth and microbial activity. The wind erodibility

group, the soil erodibility factor K, and slope are considered in estimating the likelihood of wind erosion or water erosion. Stones, cobbles, a water table, ponding, and flooding can hinder the application of waste. Permanently frozen soils are unsuitable for waste treatment.

Forestland Productivity and Management

Donald Garman, Forester, and Harold D. Hannah, Regional Forester, Virginia Department of Forestry, helped prepare this section.

The tables described in this section can help forest owners or managers plan the use of soils for wood crops. They show the potential productivity of the soils for wood crops and rate the soils according to the limitations that affect various aspects of forestland management.

Oak-hickory forests once covered most of Grayson County. As the area was settled, the forests were cleared for agriculture and pasture. The river valleys and broad ridges were the prime targets, but eventually many steep knobs and lower slopes of the bigger mountains were added to the agricultural area. This left mostly the rough, steep, and inaccessible land in forest.

Around 1900, as the need for lumber and wood products grew, the best timber was removed from all the remaining forest. The blight destroyed the American chestnut in the 1920's, and, at about the same time, agricultural land started reverting back to forest. The light-seeded species, such as yellow-poplar, ash, black locust, maple, and pine, invaded the abandoned farmland as well as the areas once occupied by chestnut; some fields were taken over by eastern white pine and black locust. This trend continued until about 1976. By this time, urban development began to decrease forest acreage as well as agricultural land.

In 1992, about 61 percent of Grayson County was covered mostly by second-growth oak, hickory, yellow-poplar, and other hardwoods. White pine makes up 23 percent of the forest type. It is often in pure stands but is usually in a mixture with the hardwoods. Southern yellow pines occur on the south-facing slopes in pure old field stands and in scattered patches high on the south- and west-facing slopes of the mountains and ridges.

Mount Rodgers, the highest point in Virginia, is the only place in Virginia where Fraser fir grows naturally in mixture with red spruce, birch, and sugar maple. Fraser fir is being depleted in natural stands by the balsam wooly aphid and acid fog. Fraser fir is commercially grown in large quantities within the county and is sold primarily as Christmas trees.

The quality of trees in Grayson County varies from excellent in moist coves and on north-facing lower slopes to very poor on the dry high ridgetops and west-facing slopes. Quality has been affected by wildfire and the high-grading type of harvests which removed only the best stems of certain species periodically. As a result, some areas contain a high percentage of trees generally not currently suitable for lumber.

The forests of Grayson County are important environmentally. They prevent and reduce erosion and help keep streams cool; streams provide habitat for trout and other aquatic life. Caution should be used when clearing land or harvesting timber near or adjacent to streams and drainageways. Forests also improve air quality by converting carbon dioxide into oxygen.

Forestland Productivity

In table 8, the *potential productivity* of merchantable or *common trees* on a soil is expressed as a site index and as a volume number. The *site index* is the average height, in feet, that dominant and codominant trees of a given species attain in a specified number of years. The site index applies to fully stocked, even-aged,

unmanaged stands. Commonly grown trees are those that forest managers generally favor in intermediate or improvement cuttings. They are selected on the basis of growth rate, quality, value, and marketability. More detailed information regarding site index is available in the “National Forestry Manual” *(11)*, which is available at the local office of the Natural Resources Conservation Service or on the Internet.

The *volume of wood fiber*, a number, is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

Trees to manage are those that are preferred for planting, seeding, or natural regeneration and those that remain in the stand after thinning or partial harvest.

Forestland Management

In table 9, parts I through V, interpretive ratings are given for various aspects of forestland management. The ratings are both verbal and numerical.

Some rating class terms indicate the degree to which the soils are suited to a specified aspect of forestland management. *Well suited* indicates that the soil has features that are favorable for the specified management aspect and has no limitations. Good performance can be expected, and little or no maintenance is needed. *Moderately suited* indicates that the soil has features that are moderately favorable for the specified management aspect. One or more soil properties are less than desirable, and fair performance can be expected. Some maintenance is needed. *Poorly suited* indicates that the soil has one or more properties that are unfavorable for the specified management aspect. Overcoming the unfavorable properties requires special design, extra maintenance, and costly alteration. *Unsuited* indicates that the expected performance of the soil is unacceptable for the specified management aspect or that extreme measures are needed to overcome the undesirable soil properties.

Proper planning for timber harvesting is essential to minimize the potential impact to soil and water quality. A harvest plan should include logging roads, log decks, streamside management zones, stream crossings, skid trails, schedule of activities, and Best Management Practices (BMP’s) for each activity.

Forests should be managed to increase economic and environmental benefits. A forest stewardship plan should be developed to guide management and utilization of the woodlands.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the specified aspect of forestland management (1.00) and the point at which the soil feature is not a limitation (0.00).

Rating class terms for fire damage and seedling mortality are expressed as *low, moderate,* and *high*. Where these terms are used, the numerical ratings indicate gradations between the point at which the potential for fire damage or seedling mortality is highest (1.00) and the point at which the potential is lowest (0.00).

The paragraphs that follow indicate the soil properties considered in rating the soils. More detailed information about the criteria used in the ratings is available in the “National Forestry Manual” *(11)*, which is available at the local office of the Natural Resources Conservation Service or on the Internet.

For *limitations affecting construction of haul roads and log landings*, the ratings are based on slope, flooding, permafrost, plasticity index, the hazard of soil slippage, content of sand, the Unified classification, rock fragments on or below the surface, depth to a restrictive layer that is indurated, depth to a water table, and ponding. The limitations are described as slight, moderate, or severe. A rating of *slight* indicates that

no significant limitations affect construction activities, *moderate* indicates that one or more limitations can cause some difficulty in construction, and *severe* indicates that one or more limitations can make construction very difficult or very costly.

The ratings of *suitability for log landings* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The soils are described as well suited, moderately suited, or poorly suited to use as log landings.

Ratings in the column *soil rutting hazard* are based on depth to a water table, rock fragments on or below the surface, the Unified classification, depth to a restrictive layer, and slope. Ruts form as a result of the operation of forest equipment. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that the soil is subject to little or no rutting, *moderate* indicates that rutting is likely, and *severe* indicates that ruts form readily.

Ratings in the column *hazard of off-road or off-trail erosion* are based on slope and on soil erodibility factor K. The soil loss is caused by sheet or rill erosion in off-road or off-trail areas where 50 to 75 percent of the surface has been exposed by logging, grazing, mining, or other kinds of disturbance. The hazard is described as slight, moderate, severe, or very severe. A rating of *slight* indicates that erosion is unlikely under ordinary climatic conditions; *moderate* indicates that some erosion is likely and that erosion-control measures may be needed; *severe* indicates that erosion is very likely and that erosion-control measures, including revegetation of bare areas, are advised; and *very severe* indicates that significant erosion is expected, loss of soil productivity and off-site damage are likely, and erosion-control measures are costly and generally impractical.

Ratings in the column *hazard of erosion on roads and trails* are based on the soil erodibility factor K, slope, and content of rock fragments. The ratings apply to unsurfaced roads and trails. The hazard is described as slight, moderate, or severe. A rating of *slight* indicates that little or no erosion is likely; *moderate* indicates that some erosion is likely, that the roads or trails may require occasional maintenance, and that simple erosion-control measures are needed; and *severe* indicates that significant erosion is expected, that the roads or trails require frequent maintenance, and that costly erosion-control measures are needed.

Ratings in the column *suitability for roads (natural surface)* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, ponding, flooding, and the hazard of soil slippage. The ratings indicate the suitability for using the natural surface of the soil for roads. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the columns *suitability for hand planting* and *suitability for mechanical planting* are based on slope, depth to a restrictive layer, content of sand, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, moderately suited, poorly suited, or unsuited to these methods of planting. It is assumed that necessary site preparation is completed before seedlings are planted.

Ratings in the column *suitability for use of harvesting equipment* are based on slope, rock fragments on the surface, plasticity index, content of sand, the Unified classification, depth to a water table, and ponding. The soils are described as well suited, moderately suited, or poorly suited to this use.

Ratings in the column *suitability for mechanical site preparation (surface)* are based on slope, depth to a restrictive layer, plasticity index, rock fragments on or below the surface, depth to a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 1 foot is considered in the ratings.

Ratings in the column *suitability for mechanical site preparation (deep)* are based on slope, depth to a restrictive layer, rock fragments on or below the surface, depth to

a water table, and ponding. The soils are described as well suited, poorly suited, or unsuited to this management activity. The part of the soil from the surface to a depth of about 3 feet is considered in the ratings.

Ratings in the column *potential for damage to soil by fire* are based on texture of the surface layer, content of rock fragments and organic matter in the surface layer, thickness of the surface layer, and slope. The soils are described as having a low, moderate, or high potential for this kind of damage. The ratings indicate an evaluation of the potential impact of prescribed fires or wildfires that are intense enough to remove the duff layer and consume organic matter in the surface layer.

Ratings in the column *potential for seedling mortality* are based on flooding, ponding, depth to a water table, content of lime, reaction, salinity, available water capacity, soil moisture regime, soil temperature regime, aspect, and slope. The soils are described as having a low, moderate, or high potential for seedling mortality.

Christmas Tree Production

Jimmy Osborne, Virginia Polytechnic Institute and State University Cooperative Extension Agent, Grayson County, helped prepare this section.

General management needed for Christmas tree production (principally Fraser fir) is suggested in the following paragraphs. Planners of Christmas tree management systems for the production of Christmas trees for individual fields or farms should consider the detailed information given in the description of each soil under “Detailed Soil Map Units.” Specific information can be obtained at the local office of the Cooperative Extension Service.

Many of the farms in Grayson County, especially in the central and western portions of the county, have gradually converted from livestock and forage production to the production of Christmas trees (fig. 14). Fraser fir is the dominant tree grown in Grayson County for Christmas tree production. The recommended production capacity for Fraser fir is about 1,500 trees per acre at 5’ X 5’ spacing. A viability of about 85 percent at harvest or about 1,275 trees per acre is expected for economic feasibility. Major soil factors to consider when selecting a potential site for Christmas tree production are: adequate soil drainage, soil texture, depth to bedrock, and topsoil thickness. Well drained soils that have an average of less than 35 percent clay in the subsoil, are at least 20 inches deep to bedrock, and have a minimum of 4 inches of topsoil are preferred. Disease problems (primarily phytophthora) increase dramatically on wetter soils and on soils which average more than 35 percent clay in the subsoil. Sites on north-northeast aspects are favored over sites on south-southwest aspects. The south-southwest aspects tend to be more droughty than the north-northeast aspects. Fraser fir stands on south-southwest aspects require a high level of soil surface cover management. Herbicidal applications must not be allowed to reduce the ground vegetation to bare cover, especially on south-southwest aspects. Optimum soil surface cover management practices are increasingly important in order to control erosion on steeper slopes.

Recreational Development

The county has many areas which offer opportunities for various outdoor recreational activities. The Jefferson National Forest, Grayson Highlands State Park (fig. 15), Blue Ridge Parkway (fig. 16), Appalachian Trail, Virginia Creeper Trail, New River Trail State Park, and the New River provide opportunities for boating, fishing, hunting, hiking, camping, biking, and horseback riding.

In table 10, parts I and II, the soils of the survey area are rated according to limitations that affect their suitability for recreational development. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are

Figure 14.—A significant shift from other land uses to Christmas tree production is taking place in Grayson County.

limited by all of the soil features that affect the recreational uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the table are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season

Figure 15.—Many areas in Grayson Highlands State Park are maintained as alpine meadow areas and exhibit the style of fencing used during the 19th century, when most of the these areas were first farmed.

when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in this table can be supplemented by other information in this survey, for example, interpretations for dwellings without basements, for local roads and streets, and for septic tank absorption fields.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas. The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil

properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Off-road motorcycle trails require little or no site preparation. They are not covered with surfacing material or vegetation. Considerable compaction of the soil material is likely. The ratings are based on the soil properties that influence erodibility, trafficability, dustiness, and the ease of revegetation. These properties are stoniness, slope, depth to a water table, ponding, flooding, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table;

Figure 16.—A view of the Blue Ridge Parkway, which is one of the major recreation areas in the county.

ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Wildlife Habitat

Grayson County has a wide variety of wildlife species, some of which are not found in other parts of the state due to the unique climatic conditions at the high elevation areas in the county.

White-tailed deer, black bear, wild turkey, ruffed grouse, raccoon, ground squirrel, fox squirrel, gray squirrel, opossum, bobcat, red fox, gray fox, and wood thrush are common in the forested mountain areas, especially on Peaks, McCamy, Unicoi, Sylco, and Sylvatus soils. Cottontail rabbit, ground hog, quail, mourning dove, and woodcock are on upland pastures and open fields throughout the county, especially on Glenelg, Edneytown, Edneyville, Hayesville, Cowee, and Pigeonroost soils.

Some species of wildlife found on the higher mountains in the county and, rarely, if ever, found in other parts of the state, include the Appalachian cottontail rabbit, northern flying squirrel, golden eagle, and raven. They inhabit the Grayson Highlands Area, especially on Mt Rogers, Buzzrock, Bloodyhorse, and Balsam soils.

Beaver, muskrat, and mink are found along the New River and its tributaries, especially on Comus, Craigsville, Delanco, and Elsinboro soils. Populations of river otter have been established along the South Fork of New River in North Carolina and are expected to eventually move into Grayson County.

Mallard, woodduck, blackduck, Canadian goose, blue-winged teal, and numerous warblers inhabit the wetland areas of Hatboro soils during migration periods.

The New River and its major tributaries offer smallmouth bass, rock bass, catfish, bluegill, yellow perch, brown trout, brook trout, rainbow trout, and muskellunge. Stocked trout fishing is permitted in season. Native brook trout inhabit some of the remote mountain streams in the county.

Numerous song and garden birds, most of which are migratory, inhabit the survey area. Birds of prey, such as hawks and owls, are common.

Soils affect the kind and amount of vegetation that is available to wildlife as food and cover. They also affect the construction of water impoundments. The kind and abundance of wildlife depend largely on the amount and distribution of food, cover, and water. Wildlife habitat can be created or improved by planting the appropriate vegetation, by maintaining the existing plant cover, or by promoting the natural establishment of desirable plants.

Engineering

This section provides information for planning land uses related to urban development and to water management. Soils are rated for various uses, and the most limiting features are identified. Ratings are given for building site development, sanitary facilities, construction materials, and water management. The ratings are based on observed performance of the soils and on the data in the tables described under the heading "Soil Properties."

Information in this section is intended for land use planning, for evaluating land use alternatives, and for planning site investigations prior to design and construction. The information, however, has limitations. For example, estimates and other data generally apply only to that part of the soil between the surface and a depth of 5 to 7 feet.

Because of the map scale, small areas of different soils may be included within the mapped areas of a specific soil.

The information is not site specific and does not eliminate the need for onsite investigation of the soils or for testing and analysis by personnel experienced in the design and construction of engineering works.

Government ordinances and regulations that restrict certain land uses or impose specific design criteria were not considered in preparing the information in this section. Local ordinances and regulations should be considered in planning, in site selection, and in design.

Soil properties, site features, and observed performance were considered in determining the ratings in this section. During the fieldwork for this soil survey, determinations were made about particle-size distribution, liquid limit, plasticity index, soil reaction, depth to bedrock, hardness of bedrock within 5 to 7 feet of the surface, soil wetness, depth to a water table, ponding, slope, likelihood of flooding, natural soil structure aggregation, and soil density. Data were collected about kinds of clay minerals, mineralogy of the sand and silt fractions, and the kinds of adsorbed cations. Estimates were made for erodibility, permeability, corrosivity, shrink-swell potential, available water capacity, and other behavioral characteristics affecting engineering uses.

This information can be used to evaluate the potential of areas for residential, commercial, industrial, and recreational uses; make preliminary estimates of construction conditions; evaluate alternative routes for roads, streets, highways, pipelines, and underground cables; evaluate alternative sites for sanitary landfills, septic tank absorption fields, and sewage lagoons; plan detailed onsite investigations of soils and geology; locate potential sources of gravel, sand, reclamation material, roadfill, and topsoil; plan structures for water management; and predict performance of proposed small structures and pavements by comparing the performance of existing similar structures on the same or similar soils.

The information in the tables, along with the soil maps, the soil descriptions, and other data provided in this survey, can be used to make additional interpretations.

Some of the terms used in this soil survey have a special meaning in soil science and are defined in the Glossary.

Building Site Development

Soil properties influence the development of building sites, including the selection of the site, the design of the structure, construction, performance after construction, and maintenance. Table 11, parts I and II, show the degree and kind of soil limitations that affect dwellings with and without basements, small commercial buildings, local roads and streets, shallow excavations, and lawns and landscaping.

The ratings in the table are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect building site development. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate

gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Dwellings are single-family houses of three stories or less. For dwellings without basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. For dwellings with basements, the foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of about 7 feet. The ratings for dwellings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. Compressibility is inferred from the Unified classification. The properties that affect the ease and amount of excavation include depth to a water table, ponding, flooding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Small commercial buildings are structures that are less than three stories high and do not have basements. The foundation is assumed to consist of spread footings of reinforced concrete built on undisturbed soil at a depth of 2 feet or at the depth of maximum frost penetration, whichever is deeper. The ratings are based on the soil properties that affect the capacity of the soil to support a load without movement and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity include depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility (which is inferred from the Unified classification). The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

Local roads and streets have an all-weather surface and carry automobile and light truck traffic all year. They have a subgrade of cut or fill soil material; a base of gravel, crushed rock, or soil material stabilized by lime or cement; and a surface of flexible material (asphalt), rigid material (concrete), or gravel with a binder. The ratings are based on the soil properties that affect the ease of excavation and grading and the traffic-supporting capacity. The properties that affect the ease of excavation and grading are depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, depth to a water table, ponding, flooding, the amount of large stones, and slope. The properties that affect the traffic-supporting capacity are soil strength (as inferred from the AASHTO group index number), subsidence, linear extensibility (shrink-swell potential), the potential for frost action, depth to a water table, and ponding.

Shallow excavations are trenches or holes dug to a maximum depth of 5 or 6 feet for graves, utility lines, open ditches, or other purposes. The ratings are based on the soil properties that influence the ease of digging and the resistance to sloughing. Depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, the amount of large stones, and dense layers influence the ease of digging, filling, and compacting. Depth to the seasonal high water table, flooding, and ponding may restrict the period when excavations can be made. Slope influences the ease of using machinery. Soil texture, depth to the water table, and linear extensibility (shrink-swell potential) influence the resistance to sloughing.

Lawns and landscaping require soils on which turf and ornamental trees and shrubs can be established and maintained. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate;

and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer.

Sanitary Facilities

Table 12, parts I and II, show the degree and kind of soil limitations that affect septic tank absorption fields, sewage lagoons, sanitary landfills, and daily cover for landfill. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Septic tank absorption fields are areas in which effluent from a septic tank is distributed into the soil through subsurface tiles or perforated pipe. Only that part of the soil between depths of 24 and 60 inches is evaluated. The ratings are based on the soil properties that affect absorption of the effluent, construction and maintenance of the system, and public health. Permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, and flooding affect absorption of the effluent. Stones and boulders, ice, and bedrock or a cemented pan interfere with installation. Subsidence interferes with installation and maintenance. Excessive slope may cause lateral seepage and surfacing of the effluent in downslope areas.

Some soils are underlain by loose sand and gravel or fractured bedrock at a depth of less than 4 feet below the distribution lines. In these soils the absorption field may not adequately filter the effluent, particularly when the system is new. As a result, the ground water may become contaminated.

Sewage lagoons are shallow ponds constructed to hold sewage while aerobic bacteria decompose the solid and liquid wastes. Lagoons should have a nearly level floor surrounded by cut slopes or embankments of compacted soil. Nearly impervious soil material for the lagoon floor and sides is required to minimize seepage and contamination of ground water. Considered in the ratings are slope, permeability, depth to a water table, ponding, depth to bedrock or a cemented pan, flooding, large stones, and content of organic matter.

Soil permeability is a critical property affecting the suitability for sewage lagoons. Most porous soils eventually become sealed when they are used as sites for sewage lagoons. Until sealing occurs, however, the hazard of pollution is severe. Soils that have a permeability rate of more than 2 inches per hour are too porous for the proper functioning of sewage lagoons. In these soils, seepage of the effluent can result in contamination of the ground water. Ground-water contamination is also a hazard if fractured bedrock is within a depth of 40 inches, if the water table is high enough to raise the level of sewage in the lagoon, or if floodwater overtops the lagoon.

A high content of organic matter is detrimental to proper functioning of the lagoon because it inhibits aerobic activity. Slope, bedrock, and cemented pans can cause construction problems, and large stones can hinder compaction of the lagoon floor. If

the lagoon is to be uniformly deep throughout, the slope must be gentle enough and the soil material must be thick enough over bedrock or a cemented pan to make land smoothing practical.

A *trench sanitary landfill* is an area where solid waste is placed in successive layers in an excavated trench. The waste is spread, compacted, and covered daily with a thin layer of soil excavated at the site. When the trench is full, a final cover of soil material at least 2 feet thick is placed over the landfill. The ratings in the table are based on the soil properties that affect the risk of pollution, the ease of excavation, trafficability, and revegetation. These properties include permeability, depth to bedrock or a cemented pan, depth to a water table, ponding, slope, flooding, texture, stones and boulders, highly organic layers, soil reaction, and content of salts and sodium. Unless otherwise stated, the ratings apply only to that part of the soil within a depth of about 6 feet. For deeper trenches, onsite investigation may be needed.

Hard, nonrippable bedrock, creviced bedrock, or highly permeable strata in or directly below the proposed trench bottom can affect the ease of excavation and the hazard of ground-water pollution. Slope affects construction of the trenches and the movement of surface water around the landfill. It also affects the construction and performance of roads in areas of the landfill.

Soil texture and consistence affect the ease with which the trench is dug and the ease with which the soil can be used as daily or final cover. They determine the workability of the soil when dry and when wet. Soils that are plastic and sticky when wet are difficult to excavate, grade, or compact and are difficult to place as a uniformly thick cover over a layer of refuse.

The soil material used as the final cover for a trench landfill should be suitable for plants. It should not have excess sodium or salts and should not be too acid. The surface layer generally has the best workability, the highest content of organic matter, and the best potential for plants. Material from the surface layer should be stockpiled for use as the final cover.

In an *area sanitary landfill*, solid waste is placed in successive layers on the surface of the soil. The waste is spread, compacted, and covered daily with a thin layer of soil from a source away from the site. A final cover of soil material at least 2 feet thick is placed over the completed landfill. The ratings in the table are based on the soil properties that affect trafficability and the risk of pollution. These properties include flooding, permeability, depth to a water table, ponding, slope, and depth to bedrock or a cemented pan.

Flooding is a serious problem because it can result in pollution in areas downstream from the landfill. If permeability is too rapid or if fractured bedrock, a fractured cemented pan, or the water table is close to the surface, the leachate can contaminate the water supply. Slope is a consideration because of the extra grading required to maintain roads in the steeper areas of the landfill. Also, leachate may flow along the surface of the soils in the steeper areas and cause difficult seepage problems.

Daily cover for landfill is the soil material that is used to cover compacted solid waste in an area sanitary landfill. The soil material is obtained offsite, transported to the landfill, and spread over the waste. The ratings in the table also apply to the final cover for a landfill. They are based on the soil properties that affect workability, the ease of digging, and the ease of moving and spreading the material over the refuse daily during wet and dry periods. These properties include soil texture, depth to a water table, ponding, rock fragments, slope, depth to bedrock or a cemented pan, reaction, and content of salts, sodium, or lime.

Loamy or silty soils that are free of large stones and excess gravel are the best cover for a landfill. Clayey soils may be sticky and difficult to spread; sandy soils are subject to wind erosion.

Slope affects the ease of excavation and of moving the cover material. Also, it can influence runoff, erosion, and reclamation of the borrow area.

After soil material has been removed, the soil material remaining in the borrow area must be thick enough over bedrock, a cemented pan, or the water table to permit revegetation. The soil material used as the final cover for a landfill should be suitable for plants. It should not have excess sodium, salts, or lime and should not be too acid.

Construction Materials

Table 13, parts I and II, give information about the soils as potential sources of gravel, sand, reclamation material, roadfill, and topsoil. Normal compaction, minor processing, and other standard construction practices are assumed.

Gravel and *sand* are natural aggregates suitable for commercial use with a minimum of processing. They are used in many kinds of construction. Specifications for each use vary widely. In table 13, part I, only the likelihood of finding material in suitable quantity is evaluated. The suitability of the material for specific purposes is not evaluated, nor are factors that affect excavation of the material. The properties used to evaluate the soil as a source of sand or gravel are gradation of grain sizes (as indicated by the Unified classification of the soil), the thickness of suitable material, and the content of rock fragments. If the bottom layer of the soil contains sand or gravel, the soil is considered a likely source regardless of thickness. The assumption is that the sand or gravel layer below the depth of observation exceeds the minimum thickness.

The soils are rated *good, fair,* or *poor* as potential sources of sand and gravel. A rating of *good* or *fair* means that the source material is likely to be in or below the soil. The bottom layer and the thickest layer of the soils are assigned numerical ratings. These ratings indicate the likelihood that the layer is a source of sand or gravel. The number 0.00 indicates that the layer is a poor source. The number 1.00 indicates that the layer is a good source. A number between 0.00 and 1.00 indicates the degree to which the layer is a likely source.

In table 13, part II, the rating class terms are *good, fair,* and *poor*. The features that limit the soils as sources of these materials are specified in the table. The numerical ratings given after the specified features indicate the degree to which the features limit the soils as sources of reclamation material, roadfill, and topsoil. The lower the number, the greater the limitation.

Reclamation material is used in areas that have been drastically disturbed by surface mining or similar activities. When these areas are reclaimed, layers of soil material or unconsolidated geological material, or both, are replaced in a vertical sequence. The reconstructed soil favors plant growth. The ratings in the table do not apply to quarries and other mined areas that require an offsite source of reconstruction material. The ratings are based on the soil properties that affect erosion and stability of the surface and the productive potential of the reconstructed soil. These properties include the content of sodium, salts, and calcium carbonate; reaction; available water capacity; erodibility; texture; content of rock fragments; and content of organic matter and other features that affect fertility.

Roadfill is soil material that is excavated in one place and used in road embankments in another place. In this table, the soils are rated as a source of roadfill for low embankments, generally less than 6 feet high and less exacting in design than higher embankments.

The ratings are for the whole soil, from the surface to a depth of about 5 feet. It is assumed that soil layers will be mixed when the soil material is excavated and spread.

The ratings are based on the amount of suitable material and on soil properties that affect the ease of excavation and the performance of the material after it is in place. The thickness of the suitable material is a major consideration. The ease of excavation

is affected by large stones, depth to a water table, and slope. How well the soil performs in place after it has been compacted and drained is determined by its strength (as inferred from the AASHTO classification of the soil) and linear extensibility (shrink-swell potential).

Topsoil is used to cover an area so that vegetation can be established and maintained. The upper 40 inches of a soil is evaluated for use as topsoil. Also evaluated is the reclamation potential of the borrow area. The ratings are based on the soil properties that affect plant growth; the ease of excavating, loading, and spreading the material; and reclamation of the borrow area. Toxic substances, soil reaction, and the properties that are inferred from soil texture, such as available water capacity and fertility, affect plant growth. The ease of excavating, loading, and spreading is affected by rock fragments, slope, depth to a water table, soil texture, and thickness of suitable material. Reclamation of the borrow area is affected by slope, depth to a water table, rock fragments, depth to bedrock or a cemented pan, and toxic material.

The surface layer of most soils is generally preferred for topsoil because of its organic matter content. Organic matter greatly increases the absorption and retention of moisture and nutrients for plant growth.

Water Management

Table 14 gives information on the soil properties and site features that affect water management. The degree and kind of soil limitations are given for pond reservoir areas; embankments, dikes, and levees; and aquifer-fed excavated ponds. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect these uses. *Not limited* indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. *Somewhat limited* indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. *Very limited* indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the table indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

Pond reservoir areas hold water behind a dam or embankment. Soils best suited to this use have low seepage potential in the upper 60 inches. The seepage potential is determined by the permeability of the soil and the depth to fractured bedrock or other permeable material. Excessive slope can affect the storage capacity of the reservoir area.

Embankments, dikes, and levees are raised structures of soil material, generally less than 20 feet high, constructed to impound water or to protect land against overflow. Embankments that have zoned construction (core and shell) are not considered. In this table, the soils are rated as a source of material for embankment fill. The ratings apply to the soil material below the surface layer to a depth of about 5 feet. It is assumed that soil layers will be uniformly mixed and compacted during construction.

The ratings do not indicate the ability of the natural soil to support an embankment. Soil properties to a depth even greater than the height of the embankment can affect performance and safety of the embankment. Generally, deeper onsite investigation is needed to determine these properties.

Soil material in embankments must be resistant to seepage, piping, and erosion and have favorable compaction characteristics. Unfavorable features include less than 5 feet of suitable material and a high content of stones or boulders, organic matter, or salts or sodium. A high water table affects the amount of usable material. It also affects trafficability.

Aquifer-fed excavated ponds are pits or dugouts that extend to a ground-water aquifer or to a depth below a permanent water table. Excluded are ponds that are fed only by surface runoff and embankment ponds that impound water 3 feet or more above the original surface. Excavated ponds are affected by depth to a permanent water table, permeability of the aquifer, and quality of the water as inferred from the salinity of the soil. Depth to bedrock and the content of large stones affect the ease of excavation.

Soil Properties

Data relating to soil properties are collected during the course of the soil survey.

Soil properties are determined by field examination of the soils and by laboratory index testing of some benchmark soils. Established standard procedures are followed. During the survey, many shallow borings are made and examined to identify and classify the soils and to delineate them on the soil maps. Samples are taken from some typical profiles and tested in the laboratory to determine particle-size distribution, plasticity, and compaction characteristics.

Estimates of soil properties are based on field examinations, on laboratory tests of samples from the survey area, and on laboratory tests of samples of similar soils in nearby areas. Tests verify field observations, verify properties that cannot be estimated accurately by field observation, and help to characterize key soils.

The estimates of soil properties are shown in tables. They include engineering index properties, physical and chemical properties, and pertinent soil and water features.

Engineering Soil Properties

Table 15 gives the engineering classifications and the range of engineering properties for the layers of each soil in the survey area.

Depth to the upper and lower boundaries of each layer is indicated.

Texture is given in the standard terms used by the U.S. Department of Agriculture. These terms are defined according to percentages of sand, silt, and clay in the fraction of the soil that is less than 2 millimeters in diameter. "Loam," for example, is soil that is 7 to 27 percent clay, 28 to 50 percent silt, and less than 52 percent sand. If the content of particles coarser than sand is 15 percent or more, an appropriate modifier is added, for example, "gravelly." Textural terms are defined in the Glossary.

Classification of the soils is determined according to the Unified soil classification system *(2)* and the system adopted by the American Association of State Highway and Transportation Officials *(1)*.

The Unified system classifies soils according to properties that affect their use as construction material. Soils are classified according to particle-size distribution of the fraction less than 3 inches in diameter and according to plasticity index, liquid limit, and organic matter content. Sandy and gravelly soils are identified as GW, GP, GM, GC, SW, SP, SM, and SC; silty and clayey soils as ML, CL, OL, MH, CH, and OH; and highly organic soils as PT. Soils exhibiting engineering properties of two groups can have a dual classification, for example, CL-ML.

The AASHTO system classifies soils according to those properties that affect roadway construction and maintenance. In this system, the fraction of a mineral soil that is less than 3 inches in diameter is classified in one of seven groups from A-1 through A-7 on the basis of particle-size distribution, liquid limit, and plasticity index. Soils in group A-1 are coarse grained and low in content of fines (silt and clay). At the other extreme, soils in group A-7 are fine grained. Highly organic soils are classified in group A-8 on the basis of visual inspection.

If laboratory data are available, the A-1, A-2, and A-7 groups are further classified as A-1-a, A-1-b, A-2-4, A-2-5, A-2-6, A-2-7, A-7-5, or A-7-6. As an additional

refinement, the suitability of a soil as subgrade material can be indicated by a group index number. Group index numbers range from 0 for the best subgrade material to 20 or higher for the poorest.

Rock fragments larger than 10 inches in diameter and 3 to 10 inches in diameter are indicated as a percentage of the total soil on a dry-weight basis. The percentages are estimates determined mainly by converting volume percentage in the field to weight percentage.

Percentage (of soil particles) passing designated sieves is the percentage of the soil fraction less than 3 inches in diameter based on an ovendry weight. The sieves, numbers 4, 10, 40, and 200 (USA Standard Series), have openings of 4.76, 2.00, 0.420, and 0.074 millimeters, respectively. Estimates are based on laboratory tests of soils sampled in the survey area and in nearby areas and on estimates made in the field.

Liquid limit and *plasticity index* (Atterberg limits) indicate the plasticity characteristics of a soil. The estimates are based on test data from the survey area or from nearby areas and on field examination.

Physical Soil Properties

Table 16 shows estimates of some physical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Particle size is the effective diameter of a soil particle as measured by sedimentation, sieving, or micrometric methods. Particle sizes are expressed as classes with specific effective diameter class limits. The broad classes are sand, silt, and clay, ranging from the larger to the smaller.

Sand as a soil separate consists of mineral soil particles that are 0.05 millimeter to 2 millimeters in diameter. In the table, the estimated sand content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Silt as a soil separate consists of mineral soil particles that are 0.002 to 0.05 millimeter in diameter. In the table, the estimated silt content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

Clay as a soil separate consists of mineral soil particles that are less than 0.002 millimeter in diameter. In the table, the estimated clay content of each soil layer is given as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of sand, silt, and clay affects the physical behavior of a soil. Particle size is important for engineering and agronomic interpretations, for determination of soil hydrologic qualities, and for soil classification.

The amount and kind of clay affect the fertility and physical condition of the soil and the ability of the soil to adsorb cations and to retain moisture. They influence shrink-swell potential, permeability, plasticity, the ease of soil dispersion, and other soil properties. The amount and kind of clay in a soil also affect tillage and earthmoving operations.

Moist bulk density is the weight of soil (ovendry) per unit volume. Volume is measured when the soil is at field moisture capacity, that is, the moisture content at $^1/_3$- or $^1/_{10}$-bar (33kPa or 10kPa) moisture tension. Weight is determined after the soil is dried at 105 degrees C. In the table, the estimated moist bulk density of each soil horizon is expressed in grams per cubic centimeter of soil material that is less than 2

millimeters in diameter. Bulk density data are used to compute linear extensibility, shrink-swell potential, available water capacity, total pore space, and other soil properties. The moist bulk density of a soil indicates the pore space available for water and roots. Depending on soil texture, a bulk density of more than 1.4 can restrict water storage and root penetration. Moist bulk density is influenced by texture, kind of clay, content of organic matter, and soil structure.

Saturated hydraulic conductivity refers to the ability of a soil to transmit water or air. The term “permeability,” as used in soil surveys, indicates saturated hydraulic conductivity (K_{sat}). The estimates in the table indicate the rate of water movement, in micrometers per second, when the soil is saturated. They are based on soil characteristics observed in the field, particularly structure, porosity, and texture. Permeability is considered in the design of soil drainage systems and septic tank absorption fields.

Available water capacity refers to the quantity of water that the soil is capable of storing for use by plants. The capacity for water storage is given in inches of water per inch of soil for each soil layer. The capacity varies, depending on soil properties that affect retention of water. The most important properties are the content of organic matter, soil texture, bulk density, and soil structure. Available water capacity is an important factor in the choice of plants or crops to be grown and in the design and management of irrigation systems. Available water capacity is not an estimate of the quantity of water actually available to plants at any given time.

Linear extensibility refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. The volume change is reported in the table as percent change for the whole soil. Volume change is influenced by the amount and type of clay minerals in the soil.

Linear extensibility is used to determine the shrink-swell potential of soils. The shrink-swell potential is low if the soil has a linear extensibility of less than 3 percent; moderate if 3 to 6 percent; high if 6 to 9 percent; and very high if more than 9 percent. If the linear extensibility is more than 3, shrinking and swelling can cause damage to buildings, roads, and other structures and to plant roots. Special design commonly is needed.

Organic matter is the plant and animal residue in the soil at various stages of decomposition. In the table, the estimated content of organic matter is expressed as a percentage, by weight, of the soil material that is less than 2 millimeters in diameter.

The content of organic matter in a soil can be maintained by returning crop residue to the soil. Organic matter has a positive effect on available water capacity, water infiltration, soil organism activity, and tilth. It is a source of nitrogen and other nutrients for crops and soil organisms.

Erosion factors are shown in the table as the K factor (Kw and Kf) and the T factor. Erosion factor K indicates the susceptibility of a soil to sheet and rill erosion by water. Factor K is one of six factors used in the Universal Soil Loss Equation (USLE) and the Revised Universal Soil Loss Equation (RUSLE) to predict the average annual rate of soil loss by sheet and rill erosion in tons per acre per year. The estimates are based primarily on percentage of silt, sand, and organic matter and on soil structure and permeability. Values of K range from 0.02 to 0.69. Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water.

Erosion factor Kw indicates the erodibility of the whole soil. The estimates are modified by the presence of rock fragments.

Erosion factor Kf indicates the erodibility of the fine-earth fraction, or the material less than 2 millimeters in size.

Erosion factor T is an estimate of the maximum average annual rate of soil erosion

by wind or water that can occur without affecting crop productivity over a sustained period. The rate is in tons per acre per year.

Wind erodibility groups are made up of soils that have similar properties affecting their susceptibility to wind erosion in cultivated areas. The soils assigned to group 1 are the most susceptible to wind erosion, and those assigned to group 8 are the least susceptible. The groups are described in the “National Soil Survey Handbook” *(12)*, which is available at the local office of the Natural Resources Conservation Service or on the Internet.

Wind erodibility index is a numerical value indicating the susceptibility of soil to wind erosion, or the tons per acre per year that can be expected to be lost to wind erosion. There is a close correlation between wind erosion and the texture of the surface layer, the size and durability of surface clods, rock fragments, organic matter, and a calcareous reaction. Soil moisture and frozen soil layers also influence wind erosion.

Chemical Soil Properties

Table 17 shows estimates of some chemical characteristics and features that affect soil behavior. These estimates are given for the layers of each soil in the survey area. The estimates are based on field observations and on test data for these and similar soils.

Depth to the upper and lower boundaries of each layer is indicated.

Cation-exchange capacity is the total amount of extractable bases that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. Soils having a low cation-exchange capacity hold fewer cations and may require more frequent applications of fertilizer than soils having a high cation-exchange capacity. The ability to retain cations reduces the hazard of ground-water pollution.

Effective cation-exchange capacity refers to the sum of extractable bases plus aluminum expressed in terms of milliequivalents per 100 grams of soil. It is determined for soils that have pH of less than 5.5.

Soil reaction is a measure of acidity or alkalinity. The pH of each soil horizon is based on many field tests. For many soils, values have been verified by laboratory analyses. Soil reaction is important in selecting crops and other plants, in evaluating soil amendments for fertility and stabilization, and in determining the risk of corrosion.

Water Features

Table 18 gives estimates of various water features. The estimates are used in land use planning that involves engineering considerations.

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The four hydrologic soil groups are:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils

of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

Surface runoff refers to the loss of water from an area by flow over the land surface. Surface runoff classes are based on slope, climate, and vegetative cover. It is assumed that the surface of the soil is bare and that the retention of surface water resulting from irregularities in the ground surface is minimal. The classes are negligible, very low, low, medium, high, and very high.

The *months* in the table indicate the portion of the year in which the feature is most likely to be a concern.

Water table refers to a saturated zone in the soil. The table indicates, by month, depth to the top *(upper limit)* and base *(lower limit)* of the saturated zone in most years. Estimates of the upper and lower limits are based mainly on observations of the water table at selected sites and on evidence of a saturated zone, namely grayish colors or mottles (redoximorphic features) in the soil. A saturated zone that lasts for less than a month is not considered a water table.

Ponding is standing water in a closed depression. Unless a drainage system is installed, the water is removed only by percolation, transpiration, or evaporation. The table indicates *surface water depth* and the *duration* and *frequency* of ponding. Duration is expressed as *very brief* if less than 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, rare, occasional, and frequent. *None* means that ponding is not probable; *rare* that it is unlikely but possible under unusual weather conditions (the chance of ponding is nearly 0 percent to 5 percent in any year); *occasional* that it occurs, on the average, once or less in 2 years (the chance of ponding is 5 to 50 percent in any year); and *frequent* that it occurs, on the average, more than once in 2 years (the chance of ponding is more than 50 percent in any year).

Flooding is the temporary inundation of an area caused by overflowing streams, by runoff from adjacent slopes, or by tides. Water standing for short periods after rainfall or snowmelt is not considered flooding, and water standing in swamps and marshes is considered ponding rather than flooding.

Duration and *frequency* are estimated. Duration is expressed as *extremely brief* if 0.1 hour to 4 hours, *very brief* if 4 hours to 2 days, *brief* if 2 to 7 days, *long* if 7 to 30 days, and *very long* if more than 30 days. Frequency is expressed as none, very rare, rare, occasional, frequent, and very frequent. *None* means that flooding is not probable; *very rare* that it is very unlikely but possible under extremely unusual weather conditions (the chance of flooding is less than 1 percent in any year); *rare* that it is unlikely but possible under unusual weather conditions (the chance of flooding is 1 to 5 percent in any year); *occasional* that it occurs infrequently under normal weather conditions (the chance of flooding is 5 to 50 percent in any year); *frequent* that it is likely to occur often under normal weather conditions (the chance of flooding is more than 50 percent in any year but is less than 50 percent in all months in any year); and *very frequent* that it is likely to occur very often under normal weather conditions (the chance of flooding is more than 50 percent in all months of any year).

The information is based on evidence in the soil profile, namely thin strata of gravel, sand, silt, or clay deposited by floodwater; irregular decrease in organic matter content with increasing depth; and little or no horizon development.

Also considered are local information about the extent and levels of flooding and the relation of each soil on the landscape to historic floods. Information on the extent of

flooding based on soil data is less specific than that provided by detailed engineering surveys that delineate flood-prone areas at specific flood frequency levels.

Soil Features

Table 19 gives estimates of various soil features. The estimates are used in land use planning that involves engineering considerations.

A *restrictive layer* is a nearly continuous layer that has one or more physical, chemical, or thermal properties that significantly impede the movement of water and air through the soil or that restrict roots or otherwise provide an unfavorable root environment. Examples are bedrock, cemented layers, dense layers, and frozen layers. The table indicates the hardness of the restrictive layer, which significantly affects the ease of excavation. *Depth to top* is the vertical distance from the soil surface to the upper boundary of the restrictive layer.

Potential for frost action is the likelihood of upward or lateral expansion of the soil caused by the formation of segregated ice lenses (frost heave) and the subsequent collapse of the soil and loss of strength on thawing. Frost action occurs when moisture moves into the freezing zone of the soil. Temperature, texture, density, permeability, content of organic matter, and depth to the water table are the most important factors considered in evaluating the potential for frost action. It is assumed that the soil is not insulated by vegetation or snow and is not artificially drained. Silty and highly structured, clayey soils that have a high water table in winter are the most susceptible to frost action. Well drained, very gravelly, or very sandy soils are the least susceptible. Frost heave and low soil strength during thawing cause damage to pavements and other rigid structures.

Risk of corrosion pertains to potential soil-induced electrochemical or chemical action that corrodes or weakens uncoated steel or concrete. The rate of corrosion of uncoated steel is related to such factors as soil moisture, particle-size distribution, acidity, and electrical conductivity of the soil. The rate of corrosion of concrete is based mainly on the sulfate and sodium content, texture, moisture content, and acidity of the soil. Special site examination and design may be needed if the combination of factors results in a severe hazard of corrosion. The steel or concrete in installations that intersect soil boundaries or soil layers is more susceptible to corrosion than the steel or concrete in installations that are entirely within one kind of soil or within one soil layer.

For uncoated steel, the risk of corrosion, expressed as *low, moderate,* or *high,* is based on soil drainage class, total acidity, electrical resistivity near field capacity, and electrical conductivity of the saturation extract.

For concrete, the risk of corrosion also is expressed as *low, moderate,* or *high*. It is based on soil texture, acidity, and amount of sulfates in the saturation extract.

Classification of the Soils

The system of soil classification used by the National Cooperative Soil Survey has six categories *(13, 15)*. Beginning with the broadest, these categories are the order, suborder, great group, subgroup, family, and series. Classification is based on soil properties observed in the field or inferred from those observations or from laboratory measurements. Table 20 shows the classification of the soils in the survey area. The categories are defined in the following paragraphs.

ORDER. Twelve soil orders are recognized. The differences among orders reflect the dominant soil-forming processes and the degree of soil formation. Each order is identified by a word ending in *sol*. An example is Ultisol.

SUBORDER. Each order is divided into suborders primarily on the basis of properties that influence soil genesis and are important to plant growth or properties that reflect the most important variables within the orders. The last syllable in the name of a suborder indicates the order. An example is Udult (*Ud*, meaning humid, plus *ult*, from Ultisol).

GREAT GROUP. Each suborder is divided into great groups on the basis of close similarities in kind, arrangement, and degree of development of pedogenic horizons; soil moisture and temperature regimes; type of saturation; and base status. Each great group is identified by the name of a suborder and by a prefix that indicates a property of the soil. An example is Hapludults (*Hapl*, meaning minimal horizonation, plus *udult*, the suborder of the Ultisols that has a udic moisture regime).

SUBGROUP. Each great group has a typic subgroup. Other subgroups are intergrades or extragrades. The typic subgroup is the central concept of the great group; it is not necessarily the most extensive. Intergrades are transitions to other orders, suborders, or great groups. Extragrades have some properties that are not representative of the great group but do not indicate transitions to any other taxonomic class. Each subgroup is identified by one or more adjectives preceding the name of the great group. The adjective *Typic* identifies the subgroup that typifies the great group. An example is Typic Hapludults.

FAMILY. Families are established within a subgroup on the basis of physical and chemical properties and other characteristics that affect management. Generally, the properties are those of horizons below plow depth where there is much biological activity. Among the properties and characteristics considered are particle-size class, mineralogy class, cation-exchange activity class, soil temperature regime, soil depth, and reaction class. A family name consists of the name of a subgroup preceded by terms that indicate soil properties. An example is fine-loamy, mixed, active, mesic Typic Hapludults.

SERIES. The series consists of soils within a family that have horizons similar in color, texture, structure, reaction, consistence, mineral and chemical composition, and arrangement in the profile.

Soil Series and Their Morphology

In this section, each soil series recognized in the survey area is described. Characteristics of the soil and the material in which it formed are identified for each series. A pedon, a small three-dimensional area of soil, that is typical of the series in

the survey area is described. The detailed description of each soil horizon follows standards in the "Soil Survey Manual" *(17)* and in the "Field Book for Describing and Sampling Soils" *(14)*. Many of the technical terms used in the descriptions are defined in "Soil Taxonomy" *(13)* and in "Keys to Soil Taxonomy" *(15)*. Unless otherwise indicated, colors in the descriptions are for moist soil. Following the pedon description is the range of important characteristics of the soils in the series.

Balsam Series

Physiographic province: Blue Ridge
Landform: Coves, benches, and saddles; on high mountains
Parent material: Colluvium derived from rhyolite
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Very deep
Slope range: 2 to 55 percent

Associated Soils

- Nopan soils, which are poorly drained and have fewer rock fragments in the subsoil than the Balsam soils
- Buzzrock soils, which are deep to hard bedrock
- Bloodyhorse soils, which are moderately deep to hard bedrock
- Mt Rogers soils on summits, shoulders, and backslopes

Taxonomic Classification

Loamy-skeletal, isotic, frigid Humic Dystrudepts

Typical Pedon

Balsam cobbly loam, 15 to 35 percent slopes, very bouldery; in Grayson County, Virginia; about 1.51 miles northwest of Mill Creek, about 1.28 miles north of the junction of Highways VA-362 and US-58 on Highway VA-362, about 1.0 mile southwest of Grayson Highlands Campground, in a hardwood forest; Trout Dale, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 37 minutes 50.00 seconds N. and long. 81 degrees 29 minutes 51.00 seconds W.

Oe—0 to 2 inches; moderately decomposed plant material.

A1—2 to 10 inches; very dark gray (10YR 3/1) cobbly loam, very dark grayish brown (10YR 3/2) dry; weak fine granular structure; very friable; many fine and medium and few coarse roots; 5 percent gravel and 20 percent cobbles; extremely acid; clear wavy boundary.

A2—10 to 19 inches; dark brown (10YR 3/3) cobbly loam, brown (10YR 4/3) dry; weak fine granular structure; very friable; common fine and medium and few coarse roots; 5 percent gravel and 25 percent cobbles; very strongly acid; clear wavy boundary.

Bw1—19 to 35 inches; yellowish brown (10YR 5/6) very cobbly loam; weak medium subangular blocky structure; friable; common fine and medium and few coarse roots; 10 percent gravel and 35 percent cobbles; very strongly acid; gradual wavy boundary.

Bw2—35 to 48 inches; yellowish brown (10YR 5/6) extremely cobbly loam; weak fine subangular blocky structure; friable; few fine and medium roots; 20 percent gravel and 40 percent cobbles; very strongly acid; clear wavy boundary.

C—48 to 62 inches; yellowish brown (10YR 5/6) extremely cobbly sandy loam; massive; very friable; 25 percent gravel and 50 percent cobbles; very strongly acid.

Range in Characteristics

Solum thickness: 40 to 72 inches
Depth to bedrock: More than 72 inches
Rock fragments: 25 to 35 percent in the A horizon, 25 to 60 percent in the B horizon, and 35 to 90 percent in the C horizon
Reaction: Extremely acid to moderately acid in unlimed areas

A horizon:
Hue—7.5YR to 2.5Y
Value—2 or 3
Chroma—0 to 3
Fine-earth texture—loam

AB horizon (if it occurs):
Hue—7.5YR to 2.5Y
Value—3 or 4
Chroma—2 to 4
Fine-earth texture—loam, fine sandy loam, or sandy loam

Bw horizon:
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam, sandy clay loam, or sandy loam

BC horizon (if it occurs):
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, sandy loam, or fine sandy loam

C horizon:
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, sandy loam, fine sandy loam, or loamy sand

Bloodyhorse Series

Physiographic province: Blue Ridge
Landform: Ridges and knobs on high mountains
Parent material: Creep deposits over residuum weathered from gneiss, granite, and rhyolite
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 7 to 80 percent

Associated Soils

- Mt Rogers soils, which are very deep to bedrock
- Buzzrock soils, which are deep to hard bedrock

Taxonomic Classification

Loamy-skeletal, isotic, frigid Humic Dystrudepts

Typical Pedon

Bloodyhorse gravelly loam, 7 to 35 percent slopes, very bouldery; in Grayson County, Virginia; about 3.0 miles north of Independence, about 1.8 miles east of the junction of Highways VA-729 and US-21, about 2.3 miles north of the junction of Highways VA-654 and US-21, in a pasture; Elk Creek, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 40 minutes 3.00 seconds N. and long. 81 degrees 9 minutes 60.00 seconds W.

A—0 to 12 inches; dark brown (10YR 3/3) gravelly loam, dark yellowish brown (10YR 4/4) dry; weak fine granular structure; very friable; many very fine roots; 20 percent gravel; very strongly acid; clear smooth boundary.
Bw—12 to 28 inches; yellowish brown (10YR 5/6) very gravelly loam; weak fine subangular blocky structure; friable; common fine roots; 40 percent gravel; very strongly acid; clear smooth boundary.
C—28 to 37 inches; yellowish brown (10YR 5/6) extremely gravelly loam; massive; friable; few fine roots; 60 percent gravel; very strongly acid; clear smooth boundary.
R—37 inches; hard granite bedrock.

Range in Characteristics

Solum thickness: 15 to 40 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 20 to 35 percent in the A horizon, 35 to 90 percent in the B horizon, and 40 to 90 percent in the C horizon
Reaction: Extremely acid to moderately acid

A horizon:
Hue—7.5YR to 2.5Y
Value—2 or 3
Chroma—0 to 3
Fine-earth texture—loam

Bw horizon:
Hue—7.5YR to 2.5Y
Value—3 to 6
Chroma—2 to 8
Fine-earth texture—fine sandy loam, sandy loam, loam, or silt loam

C horizon:
Hue—7.5YR to 2.5Y
Value—3 to 6
Chroma—2 to 8
Fine-earth texture—fine sandy loam, sandy loam, loam, or silt loam

Braddock Series

Physiographic province: Blue Ridge
Landform: Stream terraces, coves, and benches; on foothills
Parent material: Alluvium and/or colluvium derived from igneous rock and/or metamorphic rock
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 2 to 35 percent

Associated Soils

- Delanco soils, which are moderately well drained and have less clay in the subsoil than the Braddock soils
- Tate soils, which have less clay in the subsoil than the Braddock soils

Taxonomic Classification

Fine, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Braddock loam, 7 to 15 percent slopes; in Grayson County, Virginia; about 2.0 miles south of Fries, about 2.0 miles northeast of the junction of Highways VA-638 and VA-94, about 1.5 miles west of the Carroll County line, about 1.3 miles northwest of the junction of Highways VA-634 and VA-641, in a hayfield; Galax, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 41 minutes 6.00 seconds N. and long. 80 degrees 58 minutes 33.00 seconds W.

A—0 to 8 inches; brown (7.5YR 4/4) loam; moderate medium granular structure; friable; many very fine and fine roots; common fine mica flakes; slightly acid; abrupt smooth boundary.

BA—8 to 15 inches; strong brown (7.5YR 4/6) clay loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; common fine mica flakes; moderately acid; clear smooth boundary.

Bt1—15 to 51 inches; red (2.5YR 5/6) clay; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; few very fine and fine roots; common distinct clay films on all faces of peds; common fine mica flakes; strongly acid; gradual smooth boundary.

Bt2—51 to 62 inches; red (2.5YR 4/6) clay loam; weak medium subangular blocky structure; firm, moderately sticky, slightly plastic; common distinct clay films on all faces of peds; common fine mica flakes; strongly acid.

Range in Characteristics

Solum thickness: More than 40 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 25 percent in the the upper part of the solum and 0 to 40 percent in the lower part of the solum and in the substratum
Reaction: Extremely acid to strongly acid in unlimed areas

Ap horizon (if it occurs):
Hue—7.5YR or 10YR
Value—2 to 5
Chroma—1 to 6
Fine-earth texture—loam

A horizon:
Hue—7.5YR or 10YR
Value—2 to 5
Chroma—1 to 6
Fine-earth texture—loam

E horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam, sandy loam, or fine sandy loam

BA horizon or BE horizon (if it occurs):
Hue—2.5YR to 7.5YR
Value—4 or 5
Chroma—4 to 8
Fine-earth texture—sandy clay loam, clay loam, or clay

Bt horizon:
Hue—10R to 5YR
Value—3 to 5
Chroma—6 to 8
Fine-earth texture—clay, sandy clay, clay loam, or silty clay loam

BC horizon (if it occurs):
Hue—10R to 5YR
Value—3 to 5
Chroma—6 to 8
Fine-earth texture—sandy clay loam, clay loam, sandy clay, silty clay loam, or clay

C or 2C horizon (if it occurs):
Hue—10R to 7.5YR
Value—3 to 8
Chroma—1 to 8
Fine-earth texture—sandy loam, loam, sandy clay loam, clay loam, silty clay loam, clay, or sandy clay

Brevard Series

Physiographic province: Blue Ridge
Landform: Coves and benches on low mountains and foothills
Parent material: Colluvium derived from igneous rock and/or metamorphic rock
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 8 to 25 percent

Associated Soils

- Chestnut soils, which are moderately deep to soft bedrock and have less clay in the subsoil than the Brevard soils
- Peaks soils, which are moderately deep to hard bedrock and have less clay and more rock fragments in the subsoil than the Brevard soils

Taxonomic Classification

Fine-loamy, parasesquic, mesic Typic Hapludults

Typical Pedon

Brevard gravelly fine sandy loam; in Surry County, North Carolina; about 4 miles southwest of Low Gap, 1.4 miles west of the intersection of Highways NC-1411 and NC-1408 on Highway NC-1411, about 900 feet west of Eckerd Camp Shop and 200 feet west of a campsite, in a hardwood forest; Roaring Gap, North Carolina USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 29 minutes 56.00 seconds N. and long. 80 degrees 55 minutes 3.00 seconds W.

A1—0 to 5 inches; dark brown (7.5YR 3/2) gravelly fine sandy loam; weak fine granular structure; very friable; 2 percent stones, 2 percent flagstones, and 25 percent gravel; very strongly acid; clear wavy boundary.

A2—5 to 8 inches; dark brown (7.5YR 3/4) gravelly fine sandy loam; weak fine granular structure; very friable; 2 percent flagstones and 25 percent gravel; very strongly acid; clear wavy boundary.

BA—8 to 12 inches; strong brown (7.5YR 4/6) gravelly sandy clay loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; few fine mica flakes; 20 percent gravel; very strongly acid; clear wavy boundary.

Bt1—12 to 17 inches; yellowish red (5YR 4/6) gravelly sandy clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few faint clay films on all faces of peds; few fine mica flakes; 15 percent gravel; very strongly acid; gradual wavy boundary.

Bt2—17 to 33 inches; red (2.5YR 4/6) gravelly sandy clay loam; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; few faint clay films on all faces of peds; few fine mica flakes; 15 percent gravel; very strongly acid; gradual wavy boundary.

Bt3—33 to 48 inches; yellowish red (5YR 4/6) gravelly sandy clay loam; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; few faint clay films on all faces of peds; few fine mica flakes; 15 percent gravel; very strongly acid; gradual wavy boundary.

C—48 to 60 inches; yellowish red (5YR 5/8) very gravelly fine sandy loam; massive; very friable; few fine mica flakes; 35 percent gravel; strongly acid.

Range in Characteristics

Solum thickness: 40 to 60 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 50 percent, by volume, in the upper part of the solum, 0 to 35 percent in the lower part of the solum, and 15 to 60 percent in the substratum
Reaction: Very strongly acid to moderately acid in unlimed areas

A1 horizon:
Hue—5YR to 10YR
Value—2 to 5
Chroma—2 to 4
Fine-earth texture—fine sandy loam

A2 horizon:
Hue—5YR to 10YR
Value—3 to 6
Chroma—3 to 6
Fine-earth texture—fine sandy loam, sandy loam, or loam

BA horizon or BE horizon (if it occurs):
Hue—2.5YR to 7.5YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—sandy clay loam, fine sandy loam, sandy loam, or loam

Bt horizon:
Hue—10R to 5YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—sandy clay loam, clay loam, or loam

BC horizon (if it occurs):
Hue—10R to 7.5YR
Value—4 to 6
Chroma—4 to 8

Mottles (if they occur)—in shades of red, yellow, or brown
Fine-earth texture—sandy clay loam, fine sandy loam, sandy loam, or loam

C horizon or 2C horizon (if it occurs):
Hue—variable
Value—variable
Chroma—4 to 8
Mottles—horizon may be mottled in shades of red, yellow, or brown
Fine-earth texture—variable; ranging from loamy to clayey

Burton Series

Physiographic province: Blue Ridge
Landform: Broad ridges on high mountains
Parent material: Residuum weathered from metagraywacke, metasandstone, and phyllite
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 7 to 55 percent

Associated Soils

- Pineola soils, which have more clay in the subsoil than the Burton soils; at lower elevations

Taxonomic Classification

Fine-loamy, isotic, frigid Humic Dystrudepts

Typical Pedon

Burton loam, 35 to 55 percent slopes, very stony; in Grayson County, Virginia; about 2.0 miles southwest of Greencove, about 1.75 miles west-southwest of the junction of Highways VA-755 and VA-726, about 1.2 miles northeast of the North Carolina Corner, 1.77 mile west of Whitetop Cemetery, in a hardwood forest; Grayson, Tennessee USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 35 minutes 49.00 seconds N. and long. 81 degrees 39 minutes 36.00 seconds W.

Oe—0 to 2 inches; moderately decomposed plant material.
A—2 to 13 inches; very dark grayish brown (10YR 3/2) loam, brown (10YR 4/3) dry; weak medium granular structure; friable; many fine and medium roots; 5 percent gravel; very strongly acid; clear smooth boundary.
Bw—13 to 21 inches; yellowish brown (10YR 5/6) loam; weak medium subangular blocky structure; friable; common fine and medium roots; 10 percent gravel; strongly acid; clear wavy boundary.
C—21 to 26 inches; yellowish brown (10YR 5/4) very gravelly sandy loam; massive; friable; few fine and medium roots; 40 percent gravel; strongly acid; abrupt wavy boundary.
Cr—26 to 31 inches; rippable and weathered metagraywacke bedrock.
R—31 inches; hard metagraywacke bedrock.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to hard bedrock: 20 to 40 inches
Rock fragments: 0 to 15 percent in the A horizon, 0 to 35 percent in the B horizon, and 0 to 50 percent in the C horizon
Reaction: Extremely acid to moderately acid throughout the profile in unlimed areas

A horizon:
Hue—7.5YR or 10YR
Value—2 or 3
Chroma—1 to 3
Texture—loam

AB horizon (if it occurs):
Hue—10YR
Value—3 or 4
Chroma—1 to 3
Fine-earth texture—loam, fine sandy loam, or sandy loam

Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—3 to 8
Fine-earth texture—loam, fine sandy loam, or sandy loam

C horizon:
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—3 to 8
Fine-earth texture—loam, fine sandy loam, sandy loam, or loamy sand

The range in characteristics of the Official Series Description for the Burton series indicates that flakes of mica are few or common throughout the soil. The Burton soils in this survey area do not have mica flakes. This deviation does not affect interpretations or classification.

Buzzrock Series

Physiographic province: Blue Ridge
Landform: Ridges and knobs on high mountains
Parent material: Creep deposits derived from rhyolite
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Deep
Slope range: 7 to 35 percent

Associated Soils

- Mt Rogers soils, which are very deep to bedrock
- Bloodyhorse soils, which are moderately deep to hard bedrock

Taxonomic Classification

Loamy-skeletal over fragmental, isotic over mixed, frigid Humic Dystrudepts

Typical Pedon

Buzzrock loam; in the Jefferson National Forest, about 2.6 miles northwest of Whitetop, Virginia, about 1.1 miles northwest of the junction of Highways NF-89 (the road to Whitetop Mountain) and VA-600, about 2.6 miles south of the junction of Highways VA-603 and VA-600, in a pasture; Whitetop Mountain, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 38 minutes 6.00 seconds N. and long. 81 degrees 36 minutes 26.00 seconds W.

A—0 to 14 inches; very dark brown (10YR 2/2) loam, very dark grayish brown (10YR

3/2) dry; moderate fine granular structure; very friable; many fine roots; 10 percent gravel; very strongly acid; clear smooth boundary.

Bw—14 to 20 inches; dark yellowish brown (10YR 4/4) very channery loam; weak fine subangular blocky structure; very friable; common fine roots; 50 percent channers; very strongly acid; clear wavy boundary.

C—20 to 42 inches; horizon is 95 percent rock fragments and 5 percent fine-earth; fine-earth part is yellowish brown (10YR 5/4) loam; rock fragments are 30 percent cobbles and 65 percent angular rhyolite channers; single grain; loose; very strongly acid; clear smooth boundary.

R—42 inches; hard rhyolite bedrock.

Range in Characteristics

Solum thickness: 15 to 40 inches
Depth to bedrock: 40 to 60 inches
Content of rock fragments: 10 to 35 percent in the A horizon, 35 to 65 percent in the B horizon, and more than 90 percent in the C horizon
Reaction: Extremely acid to moderately acid

A horizon:
Hue—7.5YR to 2.5Y
Value—2 or 3
Chroma—0 to 3
Fine-earth texture—loam

Bw horizon:
Hue—7.5YR to 2.5Y
Value—3 to 6
Chroma—2 to 8
Fine-earth texture—fine sandy loam, sandy loam, loam, or silt loam

C horizon:
Hue—7.5YR to 2.5Y
Value—3 to 6
Chroma—2 to 8
Fine-earth texture—fine sandy loam, sandy loam, loam, or silt loam

Chestnut Series

Physiographic province: Blue Ridge
Landform: Ridges and knobs on low mountains and foothills
Parent material: Residuum weathered from granite, gneiss, and/or schist
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 8 to 90 percent

Associated Soils

- Peaks soils, which have more rock fragments in the subsoil than the Chestnut soils
- Cowee soils, which have more clay in the subsoil than the Chestnut soils
- Tuckasegee soils, which are very deep to bedrock and have a dark surface layer that is thicker than that of the Chestnut soils

Taxonomic Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Typical Pedon

Chestnut gravelly fine sandy loam; in Surry County, North Carolina; about 3 miles northwest of Low Gap, 1.0 mile south of the intersection of Highways NC-89 and NC-18 on Highway NC-89, about 150 feet downslope west of a hairpin curve on Highway NC-89, in a hardwood forest; Cumberland Knob, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 32 minutes 8.00 seconds N. and long. 80 degrees 53 minutes 37.00 seconds W.

A—0 to 3 inches; very dark grayish brown (10YR 3/2) gravelly fine sandy loam; weak fine granular structure; very friable; many fine and medium and few coarse roots; many fine tubular pores; common fine mica flakes; 5 percent channers and 15 percent gravel; very strongly acid; clear wavy boundary.

BA—3 to 8 inches; dark yellowish brown (10YR 4/4) gravelly fine sandy loam; few medium faint brown (10YR 4/3) and common medium faint yellowish brown (10YR 5/4) mottles; weak fine subangular blocky structure; very friable; common fine and medium and few coarse roots; many fine tubular pores; common fine mica flakes; 15 percent gravel; strongly acid; clear wavy boundary.

Bw—8 to 21 inches; light olive brown (2.5Y 5/4) gravelly fine sandy loam; common medium faint yellowish brown (10YR 5/4) mottles; weak fine subangular blocky structure; very friable; common fine and medium and few coarse roots; many fine tubular pores; common fine mica flakes; 2 percent channers and 20 percent gravel; strongly acid; gradual wavy boundary.

C—21 to 29 inches; light olive brown (2.5Y 5/4) gravelly fine sandy loam; common medium faint yellowish brown (10YR 5/4) mottles; massive; very friable; common fine and medium and few coarse roots; common fine mica flakes; 20 percent gravel; strongly acid; gradual wavy boundary.

Cr—29 to 45 inches; partially weathered schist bedrock.

R—45 inches; hard schist bedrock.

Range in Characteristics

Solum thickness: 15 to 39 inches
Depth to bedrock: 20 to 40 inches to soft bedrock; more than 40 inches to hard bedrock
Rock fragments: 0 to 35 percent throughout the profile
Reaction: Extremely acid to moderately acid in unlimed areas

A horizon:
Hue—7.5YR to 2.5Y
Value—2 to 6
Chroma—1 to 6
Fine-earth texture—fine sandy loam

BA horizon:
Hue—7.5YR to 2.5Y
Value—3 or 4
Chroma—3 or 4
Fine-earth texture—loam, fine sandy loam, or sandy loam

Bw horizon:
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—sandy loam, fine sandy loam, or loam; some pedons have thin subhorizons of sandy clay loam

C horizon:
Color—horizon has colors similar to those of the Bw horizon or is multicolored
Fine-earth texture—loam, sandy loam, fine sandy loam, loamy sand, or loamy fine sand

Cr horizon:
Bedrock—weathered, multicolored felsic crystalline rock, such as gneiss, schist, or granite, that is rippable

Codorus Series

Physiographic province: Blue Ridge
Landform: Flood plains in valleys
Parent material: Alluvium derived from igneous rock and/or metamorphic rock
Drainage class: Somewhat poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Hatboro soils, which are poorly drained
- Comus soils, which are well drained
- Craigsville soils, which are well drained and have more rock fragments in the subsoil than the Codorus soils

Taxonomic Classification

Fine-loamy, mixed, active, mesic Fluvaquentic Dystrudepts

Typical Pedon

Codorus loam, 0 to 3 percent slopes, frequently flooded; in Grayson County, Virginia; about 5.3 miles southeast of Galax, about 1.0 mile southeast of the junction of Highways VA-799 and VA-790, about 1.25 mile southwest of the junction of Highways VA-718 and VA-799, in a pasture; Lambsburg, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 35 minutes 8.00 seconds N. and long. 80 degrees 51 minutes 58.00 seconds W.

Ap—0 to 7 inches; brown (10YR 4/3) loam; weak fine granular structure; friable; common fine and many very fine roots; common fine mica flakes; slightly acid; abrupt smooth boundary.
Bw1—7 to 12 inches; brown (10YR 5/3) loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; common fine mica flakes; moderately acid; clear smooth boundary.
Bw2—12 to 19 inches; brown (10YR 5/3) loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; few fine prominent yellowish brown (10YR 5/8) masses of oxidized iron; common fine mica flakes; strongly acid; gradual smooth boundary.
Bw3—19 to 37 inches; yellowish brown (10YR 5/4) loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common medium distinct gray (10YR 5/1) iron depletions; strongly acid; abrupt smooth boundary.
C1—37 to 49 inches; yellowish brown (10YR 5/4) gravelly sandy loam; massive; friable, nonsticky, nonplastic; common medium distinct gray (10YR 5/1) iron depletions; 20 percent well rounded gravel; strongly acid; gradual smooth boundary.
C2—49 to 62 inches; yellowish brown (10YR 5/4) very gravelly sandy loam; massive;

friable, nonsticky, nonplastic; common medium distinct gray (10YR 5/1) iron depletions; 45 percent well rounded gravel; strongly acid.

Range in Characteristics

Solum thickness: 30 to 60 inches
Depth to bedrock: More than 72 inches
Rock fragments: 0 to 15 percent in the A and B horizons, 0 to 25 percent in the C horizon above a depth of 40 inches, and 0 to 70 percent in the C horizon below a depth of 40 inches
Reaction (in unlimed areas): Very strongly acid to moderately acid in the upper part of the solum and strongly acid to slightly acid in the lower part of the solum and in the substratum

A or Ap horizon:
Hue—10YR
Value—3 to 6
Chroma—2 or 3
Texture—loam

B horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Redoximorphic features—in shades of brown and gray
Texture—loam, silt loam, clay loam, or silty clay loam

C horizon:
Hue—7.5YR to 2.5Y
Value—3 to 5
Chroma—3 or 4
Redoximorphic features—in shades of brown and gray
Fine-earth texture—loam, silt loam, clay loam, or silty clay loam

Cg horizon (if it occurs):
Hue—neutral, 7.5YR, or 10YR
Value—3 to 5
Chroma—0 to 2
Redoximorphic features—in shades of brown
Fine-earth texture—loam, silt loam, clay loam, or silty clay loam

Comus Series

Physiographic province: Blue Ridge
Landform: Flood plains in valleys
Parent material: Alluvium derived from igneous rock and/or metamorphic rock
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Delanco soils, which are moderately well drained
- Elsinboro soils, which have more clay in the subsoil than the Comus soils
- Kinkora soils, which are poorly drained and have more clay in the subsoil than the Comus soils

Taxonomic Classification

Coarse-loamy, mixed, active, mesic Fluventic Dystrudepts

Typical Pedon

Comus fine sandy loam, 0 to 3 percent slopes, frequently flooded; in Grayson County, Virginia; about 2.75 miles south of Fries, about 1.35 miles west of the junction of Highways VA-641 and VA-634, about 2.45 miles northwest of the junction of Highways US-58 and VA-94, in a pasture along the New River; Galax, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 40 minutes 22.00 seconds N. and long. 80 degrees 58 minutes 58.00 seconds W.

Ap—0 to 9 inches; dark yellowish brown (10YR 3/4) fine sandy loam; weak fine and medium granular structure; friable; common fine and many very fine roots; few fine mica flakes; strongly acid; abrupt smooth boundary.

Bw—9 to 31 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable, slightly sticky, nonplastic; common very fine roots; few fine mica flakes; strongly acid; clear smooth boundary.

C1—31 to 53 inches; brown (10YR 4/3) fine sandy loam; few fine prominent yellowish brown (10YR 5/8) mottles; massive; friable, slightly sticky, nonplastic; few very fine roots; common fine mica flakes; strongly acid; clear smooth boundary.

2C2—53 to 62 inches; brown (10YR 4/3) gravelly loamy sand; massive; loose, nonsticky, nonplastic; 20 percent quartz gravel; strongly acid.

Range in Characteristics

Solum thickness: 24 to 40 inches
Depth to bedrock: More than 72 inches
Rock fragments: 0 to 15 percent in the A and B horizons and 0 to 40 percent in the C horizon
Reaction: Very strongly acid to moderately acid in unlimed areas

Ap horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—1 to 4
Texture—fine sandy loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Texture—loam, silt loam, or fine sandy loam

C or 2C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—2 to 6
Fine-earth texture—loam, silt loam, fine sandy loam, or sandy loam; including loamy sand or loamy fine sand below a depth of 40 inches

Cowee Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills
Parent material: Residuum weathered from mica schist and/or gneiss
Drainage class: Well drained

Slowest saturated hydraulic conductivity: Moderately high
Depth class: Moderately deep
Slope range: 7 to 55 percent

Associated Soils

- Clifford soils, which are very deep to bedrock and have more clay in the subsoil than the Cowee soils
- Glenelg soils, which are very deep to bedrock
- Peaks soils, which have less clay and more rock fragments in the subsoil than the Cowee soils

Taxonomic Classification

Fine-loamy, parasesquic, mesic Typic Hapludults

Typical Pedon

Cowee loam, 7 to 15 percent slopes; in Grayson County, Virginia; about 6.5 miles southeast of Galax, about 1.0 mile east of the junction of Highways VA-89 and VA-613, about 1.0 mile northeast of the junction of Highway VA-89 and the Blue Ridge Parkway, 75 feet north of Highway VA-804, in a hardwood forest; Cumberland Knob, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 34 minutes 46.00 seconds N. and long. 80 degrees 53 minutes 25.00 seconds W.

Oe—0 to 2 inches; moderately decomposed plant material.
A—2 to 6 inches; brown (7.5YR 4/4) loam; moderate fine granular structure; friable; many fine and medium roots; common fine mica flakes; 10 percent schist gravel; strongly acid; abrupt wavy boundary.
Bt—6 to 27 inches; yellowish red (5YR 5/6) clay loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; few medium and few very fine roots; common distinct clay films on all faces of peds; common fine mica flakes; 10 percent schist gravel; strongly acid; clear wavy boundary.
C—27 to 39 inches; multicolored gravelly sandy loam; massive; very friable, nonsticky, nonplastic; few fine and medium roots; common fine and medium mica flakes; 25 percent schist gravel; strongly acid; abrupt wavy boundary.
Cr—39 to 45 inches; interbedded mica gneiss and mica schist bedrock that is multicolored, weathered, and rippable.

Range in Characteristics

Solum thickness: 15 to 39 inches
Depth to bedrock: 20 to 40 inches to soft bedrock; more than 40 inches to hard bedrock
Rock fragments: 0 to 35 percent throughout the profile
Reaction: Extremely acid to moderately acid in unlimed areas
Flakes of mica: Few or common throughout the profile

A or Ap horizon:
Hue—5YR to 10YR
Value—3 to 5
Chroma—2 to 8
Fine-earth texture—loam

E horizon (if it occurs):
Hue—5YR or 7.5YR
Value—4 or 5
Chroma—4 to 8
Fine-earth texture—loam, sandy loam, or fine sandy loam

Bt horizon:
Hue—5YR or 7.5YR; 7.5YR is restricted to individual subhorizons
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—sandy clay loam, loam, clay loam, sandy loam, or fine sandy loam

C horizon:
Hue—horizon has hue of 5YR or 7.5YR or is multicolored
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—sandy loam, fine sandy loam, or loam

Cr horizon:
Bedrock—weathered, multicolored, felsic to mafic crystalline rock, such as gneiss or schist, that is rippable

Craigsville Series

Physiographic province: Blue Ridge
Landform: Flood plains in valleys and mountain valleys
Parent material: Alluvium derived from igneous rock and/or metamorphic rock
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Comus soils, which have fewer rock fragments in the subsoil than the Craigsville soils
- Delanco soils, which are moderately well drained and have more clay and fewer rock fragments in the subsoil than the Craigsville soils
- Elsinboro soils, which have more clay and fewer rock fragments in the subsoil than the Craigsville soils
- Kinkora soils, which are poorly drained and have more clay and fewer rock fragments in the subsoil than the Craigsville soils

Taxonomic Classification

Loamy-skeletal, mixed, superactive, mesic Fluventic Dystrudepts

Typical Pedon

Craigsville cobbly sandy loam, 0 to 3 percent slopes, frequently flooded; in Grayson County, Virginia; about 4.15 miles southeast of Whitetop, about 0.3 mile northwest of the junction of Highways VA-751-S and US-58, about 0.4 mile southeast of the junction of Highways US-58 and VA-750, about 100 yards northwest of Mt. Rogers School, in a pasture along Helton Creek; Park, North Carolina USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 35 minutes 39.00 seconds N. and long. 81 degrees 52 minutes 6.00 seconds W.

Ap—0 to 6 inches; brown (10YR 4/3) cobbly sandy loam; weak fine granular structure; very friable; many very fine and fine roots; 15 percent cobbles and 15 percent gravel; strongly acid; clear wavy boundary.
Bw1—6 to 19 inches; yellowish brown (10YR 5/6) very cobbly sandy loam; weak fine subangular blocky structure; friable; common very fine and fine roots; 20 percent gravel and 20 percent cobbles; very strongly acid; gradual wavy boundary.

Bw2—19 to 32 inches; yellowish brown (10YR 5/6) very cobbly sandy loam; weak fine and medium subangular blocky structure; friable; few very fine and fine roots; 25 percent gravel and 30 percent cobbles; very strongly acid; clear wavy boundary.
2C—32 to 62 inches; yellowish brown (10YR 5/6) extremely cobbly loamy sand; massive; very friable; 30 percent gravel and 35 percent cobbles; very strongly acid.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: More than 60 inches
Rock fragments: 15 to 35 percent in the A horizon and 35 to 70 percent in the B and C horizons
Reaction: Very strongly acid or strongly acid in unlimed areas

A or Ap horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 to 4
Fine-earth texture—sandy loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 6
Fine-earth texture—loam or sandy loam

C or 2C horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Fine-earth texture—loamy sand or sandy loam

Cullasaja Series

Physiographic province: Blue Ridge
Landform: Benches, coves, and saddles on low mountains and foothills
Parent material: Colluvium derived from rhyolite
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Very deep
Slope range: 7 to 35 percent

Associated Soils

- Tate soils, which have more clay than the Cullasaja soils, have fewer rock fragments in the subsoil, and have a thinner dark surface layer
- Thunder soils, which have more clay in the subsoil than the Cullasaja soils

Taxonomic Classification

Loamy-skeletal, isotic, mesic Humic Dystrudepts

Typical Pedon

Cullasaja cobbly loam; in the Jefferson National Forest; about 2.83 miles north of Whitetop, about 1.28 mile south of the junction of Highways VA-603 and VA-600, about 1.25 miles west of the junction of Highway VA-600 and Forest Service Road 842, in a hardwood forest; Whitetop Mountain, Virginia USGS 7.5 Minute Quadrangle, NAD27;

lat. 36 degrees 39 minutes 15.00 seconds N. and long. 81 degrees 36 minutes 57.00 seconds W.

Oe—0 to 2 inches; moderately decomposed plant material.

A1—2 to 6 inches; very dark brown (10YR 2/2) cobbly loam, brown (10YR 4/3) dry; moderate medium granular structure; friable; many fine, medium, and coarse roots; 5 percent gravel and 15 percent cobbles; very strongly acid; clear smooth boundary.

A2—6 to 15 inches; very dark grayish brown (10YR 3/2) very cobbly loam, brown (10YR 4/3) dry; moderate medium subangular blocky structure; friable; many fine, medium, and coarse roots; 10 percent gravel and 30 percent cobbles; very strongly acid; clear smooth boundary.

A3—15 to 21 inches; dark brown (10YR 3/3) very cobbly loam, dark yellowish brown (10YR 4/4) dry; moderate medium subangular blocky structure; friable; many fine, medium, and coarse roots; 10 percent gravel and 30 percent cobbles; strongly acid; gradual smooth boundary.

Bw1—21 to 34 inches; brown (10YR 4/3) very cobbly loam; moderate medium subangular blocky structure; friable; few fine and medium roots; 20 percent gravel and 35 percent cobbles; strongly acid; clear wavy boundary.

Bw2—34 to 42 inches; dark yellowish brown (10YR 4/4) very cobbly loam; moderate medium subangular blocky structure; friable; few fine and medium roots; 10 percent gravel and 30 percent cobbles; strongly acid; clear wavy boundary.

BC—42 to 62 inches; dark yellowish brown (10YR 4/4) extremely cobbly sandy loam; weak fine subangular blocky structure; friable; 20 percent gravel and 40 percent cobbles; strongly acid.

Range in Characteristics

Solum thickness: 30 to more than 60 inches
Depth to bedrock: More than 72 inches
Rock fragments: 15 to 65 percent in the A horizon, 35 to 65 percent in the Bw horizon, and 35 to 80 percent in the BC horizon
Reaction: Very strongly acid to moderately acid in unlimed areas

A horizon:
Hue—5YR to 10YR
Value—2 or 3
Chroma—1 to 3
Fine-earth texture—loam

Bw horizon:
Hue—5YR to 10YR
Value—3 to 6
Chroma—3 to 8
Fine-earth texture—sandy loam, fine sandy loam, loam, or sandy clay loam

BC horizon:
Hue—5YR to 10YR
Value—3 to 6
Chroma—4 to 8
Fine-earth texture—loam, sandy loam, coarse sandy loam, loamy fine sand, or loamy sand

C horizon (if it occurs):
Hue—horizon has hue of 5YR or 10YR or is multicolored
Value—3 to 6
Chroma—4 to 8

Fine-earth texture—loam, fine sandy loam, sandy loam, coarse sandy loam, loamy fine sand, loamy sand, or loamy coarse sand

Delanco Series

Physiographic province: Blue Ridge
Landform: Stream terraces and alluvial fans in valleys; coves in foothills
Parent material: Alluvium derived from igneous rock and/or metamorphic rock
Drainage class: Moderately well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 15 percent

Associated Soils

- Comus soils, which are well drained and have less clay in the subsoil than the Delanco soils
- Elsinboro and Tate soils, which are well drained

Taxonomic Classification

Fine-loamy, mixed, semiactive, mesic Aquic Hapludults

Typical Pedon

Delanco fine sandy loam, 2 to 7 percent slopes, rarely flooded; in Grayson County, Virginia; about 3.5 miles southeast of Independence, about 0.65 mile southeast of the junction of Highways VA-700 and VA-701, about 1.1 miles southwest of the junction of Highways VA-700 and VA-697, in a hayfield; Sparta East, North Carolina USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 34 minutes 26.00 seconds N. and long. 81 degrees 6 minutes 44.00 seconds W.

Ap—0 to 10 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak fine granular structure; friable; common fine and many very fine roots; common fine mica flakes; 2 percent quartz gravel and 3 percent gneiss gravel; strongly acid; abrupt smooth boundary.

E—10 to 16 inches; yellowish brown (10YR 5/4) fine sandy loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; common fine mica flakes; 2 percent quartz gravel and 3 percent gneiss gravel; strongly acid; clear smooth boundary.

Bt—16 to 41 inches; yellowish brown (10YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine and fine roots; common distinct clay films on all faces of peds; many medium prominent light brownish gray (10YR 6/2) iron depletions; common fine mica flakes; 5 percent gneiss gravel and 5 percent quartz gravel; strongly acid; clear smooth boundary.

BC—41 to 47 inches; yellowish brown (10YR 5/6) loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; many medium prominent light brownish gray (10YR 6/2) iron depletions; common fine mica flakes; 2 percent quartz gravel and 3 percent gneiss gravel; strongly acid; clear smooth boundary.

C—47 to 62 inches; yellowish brown (10YR 5/6) sandy loam; massive; friable, slightly sticky, slightly plastic; many medium prominent light brownish gray (10YR 6/2) iron depletions; common fine mica flakes; 2 percent quartz gravel and 3 percent gneiss gravel; strongly acid.

Range in Characteristics

Solum thickness: 26 to 56 inches

Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent in the A horizon, 0 to 20 percent in the E and B horizons, and 5 to 25 percent in the C horizon
Reaction: Extremely acid to strongly acid in unlimed areas

A horizon:
Hue—10YR
Value—3 to 5
Chroma—1 to 3
Texture—fine sandy loam

E horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 or 4
Fine-earth texture—loam or fine sandy loam

Bt horizon:
Hue—7.5YR or 10YR
Value—3 to 7
Chroma—4 to 8
Redoximorphic features—in shades of gray and brown
Fine-earth texture—clay loam or sandy clay loam

BC horizon:
Hue—2.5YR to 10YR
Value—3 to 6
Chroma—1 to 6
Redoximorphic features—in shades of gray and brown
Fine-earth texture—silt loam, loam, or sandy loam

C horizon:
Hue—2.5YR to 10YR
Value—3 to 6
Chroma—1 to 6
Redoximorphic features—in shades of gray and brown
Fine-earth texture—silt loam, loam, or sandy loam

Edneytown Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills
Parent material: Residuum weathered from gneiss, granite, and/or schist
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 55 percent

Associated Soils

- Clifford soils, which have more clay in the subsoil than the Edneytown soils
- Edneyville soils, which have less clay in the subsoil than the Edneytown soils
- Peaks soils, which are moderately deep to hard bedrock and have less clay and more rock fragments in the subsoil than the Edneytown soils
- Pigeonroost soils, which are moderately deep to soft bedrock

Taxonomic Classification

Fine-loamy, mixed, active, mesic Typic Hapludults

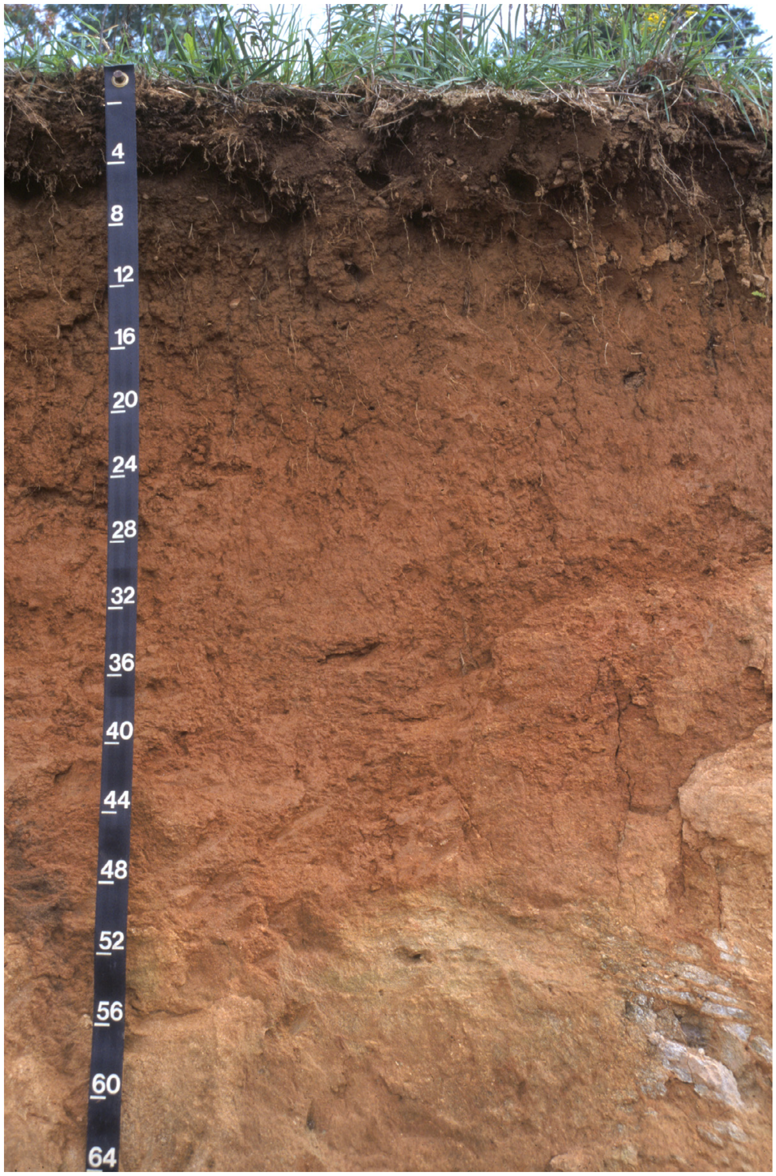


Figure 17.—An example of an Edneytown soil. Saprolite is at a depth of about 54 inches. The subsoil is generally strong brown sandy clay loam. Depth to bedrock is more than 60 inches. Depth is marked in inches.

Typical Pedon

Edneytown loam, 7 to 15 percent slopes (fig. 17); in Grayson County, Virginia; about 2.5 miles northwest of Fries, about 0.75 mile northwest of the junction of Highways VA-647 and VA-759, about 1.0 mile north of the junction of Highways VA-646 and VA-648, in a pasture; Brierpatch Mountain, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 43 minutes 35.00 seconds N. and long. 81 degrees 0 minutes 58.00 seconds W.

Ap—0 to 4 inches; brown (10YR 4/3) loam; moderate fine granular structure; friable; many very fine roots; few fine mica flakes; strongly acid; abrupt wavy boundary.

E—4 to 7 inches; yellowish brown (10YR 5/4) loam; weak medium subangular blocky

structure; friable, slightly sticky, slightly plastic; common very fine roots; few fine mica flakes; strongly acid; abrupt wavy boundary.

Bt—7 to 20 inches; strong brown (7.5YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine roots; common discontinuous clay films on all faces of peds; few fine mica flakes; strongly acid; clear wavy boundary.

BC—20 to 27 inches; strong brown (7.5YR 5/8) sandy loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; few fine mica flakes; strongly acid; clear wavy boundary.

C1—27 to 44 inches; brownish yellow (10YR 6/6) loamy sand; massive; loose, nonsticky, nonplastic; few fine mica flakes; very strongly acid; gradual wavy boundary.

C2—44 to 62 inches; brownish yellow (10YR 6/8) loamy sand; massive; loose, nonsticky, nonplastic; few fine mica flakes; very strongly acid.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent throughout the profile
Reaction: Very strongly acid or strongly acid in unlimed areas
Note: Some profiles have weathered saprolite in the lower part

Ap horizon:
Hue—10YR
Value—3 to 6
Chroma—1 to 4
Texture—loam

E horizon:
Hue—10YR
Value—4 to 6
Chroma—3 to 6
Texture—loam, fine sandy loam, or sandy loam

Bt horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 8
Texture—clay loam or sandy clay loam

BC horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—6 to 8
Texture—sandy loam or sandy clay loam

C horizon:
Hue—7.5YR or 10YR
Value—5 to 8
Chroma—3 to 8
Texture—loam, fine sandy loam, sandy loam, or loamy sand

Edneyville Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills

Parent material: Residuum weathered from gneiss, granite, and/or schist
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Very deep
Slope range: 7 to 80 percent

Associated Soils

- Edneytown soils, which have more clay in the subsoil than the Edneyville soils
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil than the Edneyville soils
- Pigeonroost soils, which are moderately deep to soft bedrock and have more clay in the subsoil than the Edneyville soils

Taxonomic Classification

Coarse-loamy, mixed, active, mesic Typic Dystrudepts

Typical Pedon

Edneyville loam, 15 to 35 percent slopes (fig. 18); in Grayson County, Virginia; about 3.5 miles northwest of Fries, about 0.2 mile southwest of the junction of Highways VA-604 and VA-644, about 0.2 mile northeast of the junction of Highways VA-646 and VA-604, in a pasture; Brierpatch Mountain, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 44 minutes 25.00 seconds N. and long. 81 degrees 0 minutes 53.00 seconds W.

Ap—0 to 5 inches; dark yellowish brown (10YR 4/4) loam; weak very fine granular structure; friable; many very fine roots; few fine mica flakes; strongly acid; abrupt wavy boundary.

AB—5 to 11 inches; yellowish brown (10YR 5/4) loam; weak medium granular structure; friable, slightly sticky, slightly plastic; common very fine roots; few fine mica flakes; strongly acid; clear wavy boundary.

Bw—11 to 26 inches; yellowish brown (10YR 5/4) sandy loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine roots; few fine mica flakes; strongly acid; clear wavy boundary.

BC—26 to 34 inches; yellowish brown (10YR 5/4) sandy loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; few fine mica flakes; strongly acid; gradual wavy boundary.

C—34 to 62 inches; brownish yellow (10YR 6/6) sandy loam; massive; very friable, slightly sticky, nonplastic; few fine mica flakes; 5 percent quartz gravel and 5 percent gneiss gravel; very strongly acid.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent in the A horizon, and 0 to 35 percent in the AB, B, BC, and C horizons
Reaction: Very strongly acid to moderately acid in unlimed areas

Ap horizon:
Hue—7.5YR or 10YR
Value—2 to 5
Chroma—1 to 4
Texture—loam

AB horizon:
Hue—7.5YR or 10YR
Value—4 to 6

Figure 18.—An example of an Edneyville soil. Edneyville soils commonly have brownish subsoils with sandy loam textures. Depth to bedrock is more than 60 inches. Depth is marked in inches.

Chroma—2 to 4
Fine-earth texture—loam, fine sandy loam, or sandy loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, fine sandy loam, or sandy loam

BC horizon:
Hue—7.5YR or 10YR
Value—4 to 6

Chroma—4 to 8
Fine-earth texture—loam, fine sandy loam, or sandy loam

C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, fine sandy loam, sandy loam, or loamy sand

Elsinboro Series

Physiographic province: Blue Ridge
Landform: Stream terraces in valleys
Parent material: Alluvium derived from igneous rock and/or metamorphic rock
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 7 percent

Associated Soils

- Comus soils, which have more sand and less clay in the subsoil than the Elsinboro soils
- Delanco soils, which are moderately well drained
- Kinkora soils, which are poorly drained and have more clay in the subsoil than the Elsinboro soils

Taxonomic Classification

Fine-loamy, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Elsinboro fine sandy loam, 2 to 7 percent slopes, rarely flooded; in Grayson County, Virginia; about 1.5 miles west-southwest of Oldtown, about 1.25 miles northwest of the junction of Highways VA-94 and US-58, about 1.2 miles northwest of the junction of Highways VA-634 and VA-882, in a cornfield; Galax, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 38 minutes 53.00 seconds N. and long. 80 degrees 59 minutes 8.00 seconds W.

Ap—0 to 10 inches; dark yellowish brown (10YR 4/4) fine sandy loam; weak very fine granular structure; friable; common fine and many very fine roots; few fine mica flakes; strongly acid; abrupt smooth boundary.

E—10 to 18 inches; brown (7.5YR 4/4) fine sandy loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; common fine mica flakes; strongly acid; clear smooth boundary.

Bt—18 to 45 inches; strong brown (7.5YR 5/6) clay loam; moderate medium subangular blocky structure; firm, slightly sticky, slightly plastic; few very fine and fine roots; common discontinuous clay films on all faces of peds; common fine mica flakes; strongly acid; clear smooth boundary.

2C—45 to 62 inches; strong brown (7.5YR 5/6) cobbly sandy loam; massive; very friable, slightly sticky, nonplastic; common fine mica flakes; 5 percent gneiss gravel, 5 percent quartz gravel, 7 percent gneiss cobbles, and 8 percent quartz cobbles; strongly acid.

Range in Characteristics

Solum thickness: 28 to 50 inches
Depth to bedrock: More than 72 inches

Rock fragments: 0 to 15 percent in the A horizon and 0 to 25 percent in the E, B, and C horizons
Reaction: Very strongly acid or strongly acid in unlimed areas

Ap horizon:
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 to 4
Texture—fine sandy loam

E horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 4
Fine-earth texture—loam, silt loam, fine sandy loam, or sandy loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—4 to 8
Fine-earth texture—silt loam, loam, silty clay loam, clay loam, or sandy clay loam

C horizon (if it occurs) or 2C horizon:
Hue—2.5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—silt loam, loam, sandy loam, fine sandy loam, or sandy clay loam

Evard Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills
Parent material: Creep deposits over residuum weathered from schist and/or gneiss
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 15 to 25 percent

Associated Soils

- Cowee soils, which are moderately deep to soft bedrock
- Chestnut soils, which are moderately deep to soft bedrock and have less clay in the subsoil than the Evard soils
- Peaks soils, which are moderately deep to hard bedrock and have less clay and more rock fragments in the subsoil than the Evard soils

Taxonomic Classification

Fine-loamy, parasesquic, mesic Typic Hapludults

Typical Pedon

Evard gravelly fine sandy loam; in Surry County, North Carolina; about 12 miles west of Dobson, 0.8 mile west of the intersection of Secondary Roads 1330 and 1331 on Secondary Road 1330, about 0.8 mile south on a timber road, 300 feet northwest of the road in a hardwood forest; Roaring Gap, North Carolina USGS 7.5 Minute Quadrangle, NAD27; lat. 26 degrees 25 minutes 33.00 seconds N. and long. 80 degrees 52 minutes 37.00 seconds W.

A—0 to 5 inches; dark yellowish brown (10YR 4/6) gravelly fine sandy loam; weak medium granular structure; very friable; many fine and medium roots; few fine mica flakes; 20 percent gravel; very strongly acid; clear smooth boundary.
E—5 to 8 inches; yellowish brown (10YR 5/6) gravelly fine sandy loam; weak medium granular structure; very friable; common fine and medium roots; few fine mica flakes; 20 percent gravel; very strongly acid; clear smooth boundary.
BE—8 to 13 inches; yellowish red (5YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium roots; few fine mica flakes; 5 percent gravel; very strongly acid; gradual wavy boundary.
Bt—13 to 29 inches; red (2.5YR 4/8) clay loam; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; few fine and medium and few coarse roots; few clay films on all faces of peds; common fine mica flakes; 5 percent gravel; very strongly acid; gradual wavy boundary.
BC—29 to 35 inches; yellowish red (5YR 5/8) sandy clay loam; weak medium subangular blocky structure; friable; few fine and medium and few coarse roots; common fine mica flakes; 5 percent gravel; very strongly acid; gradual wavy boundary.
C1—35 to 45 inches; strong brown (7.5YR 5/8) loamy fine sand; massive; very friable; few fine roots; common fine mica flakes; 5 percent gravel; strongly acid; clear irregular boundary.
C2—45 to 55 inches; yellowish red (5YR 5/8) channery fine sandy loam; massive; very friable; few fine roots; few fine mica flakes; 15 percent schist channers; strongly acid; clear wavy boundary.
C3—55 to 60 inches; yellowish brown (10YR 5/4) channery loamy fine sand; massive; very friable; common fine mica flakes; 15 percent schist channers; strongly acid.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: More than 60 inches to hard bedrock
Rock fragments: 0 to 35 percent in the upper part of the solum and in the substratum; 0 to 15 percent in the subsoil
Reaction: Very strongly acid to moderately acid in unlimed areas

A horizon:
Hue—5YR to 10YR
Value—3 to 5
Chroma—3 to 6
Fine-earth texture—fine sandy loam

E horizon:
Hue—5YR to 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—fine sandy loam, sandy loam, or loam

BE horizon or BA horizon (if it occurs):
Hue—2.5YR to 10YR
Value—4 to 8
Chroma—4 to 8
Fine-earth texture—sandy clay loam, clay loam, fine sandy loam, sandy loam, or loam

Bt horizon:
Hue—2.5YR or 5YR
Value—4 or 5

Chroma—4 to 8
Fine-earth texture—clay loam, sandy clay loam, or loam

BC horizon:
Hue—2.5YR to 7.5YR
Value—4 to 6
Chroma—6 to 8
Mottles—in shades of red, brown, and yellow
Fine-earth texture—sandy clay loam, clay loam, loam, fine sandy loam, or sandy loam

C horizon:
Hue—2.5YR to 10YR
Value—4 to 6
Chroma—6 to 8
Mottles—in shades of red, brown, and yellow
Texture—loamy fine sand, loamy sand, fine sandy loam, sandy loam, or loam

Glenelg Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills
Parent material: Residuum weathered from mica schist and/or gneiss
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 55 percent

Associated Soils

- Clifford soils, which have more clay in the subsoil than the Glenelg soils
- Cowee soils, which are moderately deep to soft bedrock
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments and less clay in the subsoil than the Glenelg soils

Taxonomic Classification

Fine-loamy, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Glenelg loam, 2 to 7 percent slopes; in Grayson County, Virginia; about 3.2 miles southwest of Baywood, about 1.0 mile west of the junction of Highways VA-629 and VA-626, about 0.1 mile north-northeast of the junction of Highways VA-628 and VA-629, in a hayfield; Sparta East, North Carolina USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 35 minutes 11.00 seconds N. and long. 81 degrees 4 minutes 44.00 seconds W.

Ap—0 to 4 inches; dark grayish brown (10YR 4/2) loam; moderate fine and medium granular structure; friable; many fine roots; few fine mica flakes; slightly acid; abrupt smooth boundary.
Bt—4 to 24 inches; strong brown (7.5YR 5/6) clay loam; moderate fine and medium subangular blocky structure; firm, moderately sticky, moderately plastic; few fine roots; many distinct clay films on all faces of peds; common fine mica flakes; moderately acid; gradual smooth boundary.
C1—24 to 45 inches; yellowish brown (10YR 5/6) fine sandy loam; massive; friable, slightly sticky, slightly plastic; many fine mica flakes; 5 percent mica schist gravel; strongly acid; diffuse smooth boundary.

C2—45 to 62 inches; dark yellowish brown (10YR 4/4) fine sandy loam; massive; friable, slightly sticky, slightly plastic; many fine mica flakes; 10 percent mica schist gravel; very strongly acid.

Range in Characteristics

Solum thickness: 18 to 30 inches
Depth to bedrock: More than 72 inches
Rock fragments: 0 to 35 percent in the A and B horizons and 5 to 35 percent in the C horizon
Reaction: Very strongly acid to slightly acid in unlimed areas

Ap horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 4
Fine-earth texture—loam

E horizon (if it occurs):
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 4
Fine-earth texture—loam or silt loam

Bt horizon:
Hue—5YR to 10YR
Value—4 or 5
Chroma—4 to 8
Fine-earth texture—loam, silt loam, silty clay loam, or clay loam

C horizon:
Hue—5YR to 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam, silt loam, fine sandy loam, or loamy sand

Greenlee Series

Physiographic province: Blue Ridge
Landform: Coves, benches, and saddles on low mountains and foothills
Parent material: Colluvium and/or local alluvium derived from metamorphic rock and/or igneous rock
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Very deep
Slope range: 8 to 55 percent

Associated Soils

- Thunder soils, which have more clay in the subsoil than the Greenlee soils
- Tate soils, which have more clay and fewer rock fragments in the subsoil than the Greenlee soils

Taxonomic Classification

Loamy-skeletal, mixed, semiactive, mesic Typic Dystrudepts

Typical Pedon

Greenlee very cobbly loam, 35 to 55 percent slopes, very stony; in Grayson County,

Virginia; about 2.26 miles east-northeast of Whitetop, about 0.75 mile north of the junction of Highways US-58 and VA-783, about 1.17 miles northeast of the junction of Highways VA-362 and US-58, in a hardwood forest; Park, North Carolina USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 37 minutes 14.00 seconds N. and long. 81 degrees 33 minutes 46.00 seconds W.

Oe—0 to 2 inches; moderately decomposed plant material.

A—2 to 7 inches; dark brown (10YR 3/3) very cobbly loam; moderate medium granular structure; friable; many fine and medium roots; 15 percent subrounded rhyolite gravel and 30 percent subrounded rhyolite cobbles; extremely acid; clear wavy boundary.

AB—7 to 14 inches; dark yellowish brown (10YR 4/4) very cobbly sandy loam; moderate fine granular structure; friable; common fine and medium roots; 15 percent subrounded rhyolite gravel and 30 percent subrounded rhyolite cobbles; very strongly acid; clear wavy boundary.

Bw1—14 to 39 inches; yellowish brown (10YR 5/4) very cobbly sandy loam; weak fine subangular blocky structure; friable; few fine roots; 10 percent subrounded rhyolite gravel and 40 percent subrounded rhyolite cobbles; very strongly acid; gradual wavy boundary.

Bw2—39 to 53 inches; yellowish brown (10YR 5/4) very cobbly sandy loam; weak fine subangular blocky structure; friable; 15 percent subrounded rhyolite gravel and 45 percent subrounded rhyolite cobbles; very strongly acid; gradual wavy boundary.

C—53 to 62 inches; yellowish brown (10YR 5/4) extremely cobbly sandy loam; structureless, massive; very friable; 15 percent subrounded rhyolite gravel and 60 percent subrounded rhyolite cobbles; very strongly acid.

Range in Characteristics

Solum thickness: 20 to 60 inches or more
Depth to bedrock: More than 60 inches
Rock fragments: 35 to 60 percent in the A and B horizons and 35 to 80 percent in the C horizon
Reaction: Extremely acid to moderately acid in unlimed areas

A horizon:
Hue—10YR or 7.5YR
Value—2 to 5
Chroma—1 to 4
Fine-earth texture—loam

AB horizon:
Hue—10YR or 7.5YR
Value—4 or 5
Chroma—3 to 6
Fine-earth texture—loam, fine sandy loam, sandy loam, and sandy clay loam

BA horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Fine-earth texture—loam, fine sandy loam, sandy loam, or sandy clay loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam, fine sandy loam, sandy loam, or sandy clay loam

BC horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Fine-earth texture—loam, sandy loam, fine sandy loam, loamy fine sand, or loamy sand

C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam, sandy loam, fine sandy loam, loamy sand, or sand

Hatboro Series

Physiographic province: Blue Ridge
Landform: Flood plains in valleys
Parent material: Alluvium derived from igneous rock and/or metamorphic rock
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Codorus soils, which are somewhat poorly drained
- Comus soils, which are well drained
- Craigsville soils, which are well drained and have more rock fragments in the subsoil than the Hatboro soils

Taxonomic Classification

Fine-loamy, mixed, active, nonacid, mesic Fluvaquentic Endoaquepts

Typical Pedon

Hatboro sandy loam, 0 to 3 percent slopes, frequently flooded; in Grayson County, Virginia; about 2.3 miles southeast of Elk Creek, about 0.3 mile northwest of the junction of Highways VA-656 and VA-660, about 0.8 mile northeast of the junction of Highways VA-660 and VA-696, in a pasture along Turkey Fork; Elk Creek, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 44 minutes 24.00 seconds N. and long. 81 degrees 14 minutes 22.00 seconds W.

Ap—0 to 8 inches; brown (10YR 4/3) sandy loam; weak fine granular structure; friable; common fine and many very fine roots; few fine faint yellowish brown (10YR 5/4) masses of oxidized iron; common fine mica flakes; slightly acid; abrupt smooth boundary.

Bg1—8 to 28 inches; light brownish gray (2.5Y 6/2) sandy clay loam; weak medium subangular blocky structure; firm, slightly sticky, slightly plastic; few fine and common very fine roots; common medium prominent yellowish brown (10YR 5/6) masses of oxidized iron; common fine mica flakes; moderately acid; gradual smooth boundary.

Bg2—28 to 45 inches; grayish brown (2.5Y 5/2) sandy clay loam; weak medium subangular blocky structure; firm, slightly sticky, slightly plastic; few very fine roots; common medium prominent strong brown (7.5YR 5/8) masses of oxidized iron; common fine mica flakes; moderately acid; abrupt smooth boundary.

Cg—45 to 62 inches; grayish brown (2.5Y 5/2) silt loam; massive; friable, slightly

sticky, slightly plastic; common medium prominent strong brown (7.5YR 5/8) masses of oxidized iron; moderately acid.

Range in Characteristics

Solum thickness: 40 to 60 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 10 percent in the A and B horizons and 0 to 80 percent in the C horizon
Reaction (in unlimed areas): Very strongly acid to neutral to a depth of 30 inches and moderately acid or slightly acid below a depth of 30 inches

A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 or 3
Redoximorphic features—in shades of brown and/or gray
Texture—sandy loam

B horizon:
Hue—10YR, 2.5Y, 5Y, or neutral
Value—4 to 7
Chroma—0 to 2
Redoximorphic features—in shades of brown and/or gray
Texture—sandy clay loam, clay loam, silty clay loam, or silt loam

C horizon:
Hue—10YR, 2.5Y, 5Y, or neutral
Value—4 to 7
Chroma—0 to 2
Redoximorphic features—in shades of brown and/or gray
Fine-earth texture—sandy clay loam, clay loam, silty clay loam, or silt loam in the upper part of horizon and stratified sand, silt, silt, and clay sediments and gravel in the lower part

Hayesville Series

Physiographic province: Blue Ridge
Landform: Ridges and hills on low mountains and foothills
Parent material: Residuum weathered from gneiss and/or schist
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 2 to 25 percent

Associated Soils

- Edneytown and Glenelg soils, which have less clay in the subsoil than the Hayesville soils
- Cowee and Pigeonroost soils, which are moderately deep to soft bedrock and have less clay in the subsoil than the Hayesville soils

Taxonomic Classification

Fine, kaolinitic, mesic Typic Kanhapludults

Typical Pedon

Hayesville loam, 2 to 7 percent slopes (fig. 19); in Grayson County, Virginia; about 0.7

Figure 19.—An example of a Hayesville soil. The subsoil is red clay. Depth to bedrock is more than 60 inches. Depth is marked in inches.

mile northeast of Baywood, about 1.0 mile northeast of the junction of Highways VA-624 and VA-626, about 100 yards northeast of the junction of Highways VA-623 and VA-626, in a hayfield; Sparta East, North Carolina USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 36 minutes 54.00 seconds N. and long. 81 degrees 0 minutes 6.00 seconds W.

Ap—0 to 6 inches; brown (7.5YR 4/4) loam; moderate fine and medium granular structure; friable; many fine roots; few fine mica flakes; slightly acid; abrupt smooth boundary.

E—6 to 11 inches; strong brown (7.5YR 5/6) loam; moderate fine granular structure;

friable, slightly sticky, slightly plastic; common fine roots; common fine mica flakes; moderately acid; abrupt smooth boundary.

Bt—11 to 43 inches; red (2.5YR 4/8) clay; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; few fine roots; many distinct clay films on all faces of peds; common fine mica flakes; strongly acid; clear smooth boundary.

BC—43 to 49 inches; red (2.5YR 4/8) clay loam; weak fine subangular blocky structure; friable, moderately sticky, slightly plastic; common fine mica flakes; strongly acid; gradual smooth boundary.

C—49 to 62 inches; red (2.5YR 4/6) sandy loam; massive; friable, slightly sticky, slightly plastic; many fine mica flakes; strongly acid.

Range in Characteristics

Solum thickness: 30 to 60 inches or more
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent in the A horizon, 0 to 35 percent in the E horizon, and 0 to 15 percent in the B and C horizons
Reaction: Very strongly acid to moderately acid in unlimed areas

Ap horizon:
Hue—5YR to 10YR
Value—3 or 4
Chroma—2 to 4
Texture—loam

E horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam or fine sandy loam

Bt horizon:
Hue—2.5YR or 5YR
Value—4 or 5
Chroma—6 to 8
Fine-earth texture—clay or clay loam

BC horizon:
Hue—2.5YR or 5YR
Value—4 to 6
Chroma—6 to 8
Fine-earth texture—sandy clay loam, clay loam, or loam

C horizon:
Hue—2.5YR to 7.5YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—sandy loam, fine sandy loam, loam, or sandy clay loam

Keener Series

Physiographic province: Blue Ridge
Landform: Coves and benches on low mountains and foothills
Parent material: Colluvium derived from metasandstone and/or quartzite
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high

Depth class: Very deep
Slope range: 2 to 35 percent

Associated Soils

- McCamy soils, which are moderately deep to hard bedrock
- Sylco soils, which are moderately deep to hard bedrock and have less clay and more rock fragments in the subsoil than the Keener soils
- Sylvatus and Unicoi soils, which are shallow to hard bedrock and have less clay and more rock fragments in the subsoil than the Keener soils

Taxonomic Classification

Fine-loamy, siliceous, semiactive, mesic Typic Hapludults

Typical Pedon

Keener loam, 7 to 15 percent slopes; in Grayson County, Virginia; about 3 miles south of Cripple Creek, about 0.2 mile northeast of the junction of Highways VA-602 and VA-653, about 1.25 miles north of Jones Knob, in a pasture; Cripple Creek, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 47 minutes 1.00 seconds N. and long. 81 degrees 4 minutes 38.00 seconds W.

Ap—0 to 5 inches; dark yellowish brown (10YR 4/4) loam; weak fine granular structure; friable; many very fine and fine roots; 5 percent metasandstone gravel; moderately acid; clear wavy boundary.

BA—5 to 14 inches; yellowish brown (10YR 5/6) loam; weak fine subangular blocky structure; friable, nonsticky, nonplastic; many very fine and fine roots; 5 percent metasandstone gravel; strongly acid; gradual wavy boundary.

Bt1—14 to 32 inches; yellowish brown (10YR 5/6) clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; common discontinuous clay films on all faces of peds; 5 percent metasandstone gravel; very strongly acid; gradual wavy boundary.

Bt2—32 to 54 inches; strong brown (7.5YR 5/6) clay loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine and fine roots; common discontinuous clay films on all faces of peds; 10 percent metasandstone gravel; very strongly acid; gradual wavy boundary.

BC—54 to 62 inches; strong brown (7.5YR 5/6) gravelly sandy clay loam; weak fine subangular blocky structure; friable, slightly sticky, nonplastic; 15 percent metasandstone gravel; very strongly acid.

Range in Characteristics

Solum thickness: More than 40 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent in the A horizon, 0 to 30 percent in the BA and Bt horizons, and 10 to 50 percent in the BC and C horizons
Reaction: Extremely acid to moderately acid in unlimed areas

A horizon:
Hue—10YR
Value—3 or 4
Chroma—2 to 4
Texture—loam

BA horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Fine-earth texture—loam or fine sandy loam

Bt horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—6 to 8
Fine-earth texture—loam, clay loam, or sandy clay loam

BC horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—6 to 8
Fine-earth texture—loam, clay loam, or sandy clay loam

C horizon (if it occurs):
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—6 to 8
Fine-earth texture—loam, fine sandy loam, or sandy loam

Kinkora Series

Physiographic province: Blue Ridge
Landform: Stream terraces in valleys
Parent material: Alluvium derived from metamorphic rock and/or igneous rock
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Moderately low
Depth class: Very deep
Slope range: 0 to 3 percent

Associated Soils

- Comus soils, which are well drained and have less clay in the subsoil than the Kinkora soils
- Delanco soils, which are moderately well drained and have less clay in the subsoil than the Kinkora soils
- Elsinboro soils, which are well drained and have less clay in the subsoil than the Kinkora soils

Taxonomic Classification

Fine, mixed, semiactive, mesic Typic Endoaquults

Typical Pedon

Kinkora fine sandy loam, 0 to 3 percent slopes, rarely flooded; in Grayson County, Virginia; about 1.0 mile northwest of Mouth of Wilson, about 0.5 mile northwest of the junction of Highways VA-728 and US-58, about 0.35 mile southeast of the junction of Highways VA-721 and US-58, in an area planted with Christmas trees; Mouth of Wilson, North Carolina USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 35 minutes 53.00 seconds N. and long. 81 degrees 21 minutes 6.00 seconds W.

A—0 to 7 inches; dark grayish brown (10YR 4/2) fine sandy loam; moderate medium granular structure; friable; common fine and many very fine roots; few fine faint light brownish gray (10YR 6/2) iron depletions; common fine mica flakes; strongly acid; abrupt smooth boundary.

ABg—7 to 16 inches; dark grayish brown (10YR 4/2) fine sandy loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; few fine prominent yellowish brown (10YR 5/8) masses of oxidized iron; common fine mica flakes; strongly acid; clear wavy boundary.

Btg1—16 to 27 inches; grayish brown (10YR 5/2) clay loam; moderate medium subangular blocky structure; firm, moderately sticky, moderately plastic; few very fine and fine roots; common distinct discontinuous clay films on all faces of peds; common medium prominent yellowish brown (10YR 5/8) masses of oxidized iron; common fine mica flakes; strongly acid; clear wavy boundary.

Btg2—27 to 38 inches; grayish brown (10YR 5/2) clay loam; weak medium subangular blocky structure; firm, moderately sticky, moderately plastic; common distinct discontinuous clay films on all faces of peds; common medium prominent yellowish brown (10YR 5/8) masses of oxidized iron; common fine mica flakes; strongly acid; abrupt smooth boundary.

Cg1—38 to 48 inches; gray (10YR 5/1) gravelly loam; massive; friable, slightly sticky, slightly plastic; common fine mica flakes; 10 percent quartz gravel and 10 percent gneiss gravel; strongly acid; clear smooth boundary.

2Cg2—48 to 62 inches; gray (10YR 5/1) gravelly loamy sand; massive; loose, nonsticky, nonplastic; common fine mica flakes; 15 percent gneiss gravel and 15 percent quartz gravel; strongly acid.

Range in Characteristics

Solum thickness: 24 to 48 inches
Depth to bedrock: More than 72 inches
Rock fragments: 0 to 15 percent in the A and B horizons and 0 to 50 percent in the C horizon
Reaction: Extremely acid to strongly acid in unlimed areas

A and E horizons (if they occur):
Hue—10YR to 5Y
Value—4 or 5
Chroma—1 or 2
Redoximorphic features—in shades of brown and gray
Texture—fine sandy loam

ABg horizon:
Hue—10YR to 5Y
Value—4 or 5
Chroma—1 or 2
Redoximorphic features—in shades of brown and gray
Texture—silt loam or fine sandy loam

Btg horizon:
Hue—10YR to 5Y or neutral
Value—5 or 6
Chroma—0 to 2
Redoximorphic features—in shades of brown and gray
Texture—silty clay loam, clay loam, silty clay, or clay

Cg horizon:
Hue—10YR to 5Y or neutral
Value—5 or 6
Chroma—0 to 2
Redoximorphic features—in shades of brown and gray
Fine-earth texture—silt loam or loam

2Cg horizon:
Hue—10YR to 5Y or neutral
Value—4 to 6
Chroma—0 to 2

Redoximorphic features—in shades of brown and gray
Fine-earth texture—sandy loam or loamy sand

Konnarock Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills
Parent material: Residuum weathered from rhythmite and tillite
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 7 to 55 percent

Associated Soils

- Tate and Keener soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Konnarock soils
- McCamy and Pigeonroost soils, which have more clay and fewer rock fragments in the subsoil than the Konnarock soils
- Unicoi soils, which are shallow to hard bedrock

Taxonomic Classification

Loamy-skeletal, mixed, semiactive, mesic Typic Dystrudepts

Typical Pedon

Konnarock channery silt loam, 15 to 35 percent slopes; in Grayson County, Virginia; about 1.1 miles north of Flatridge, about 0.5 mile north-northeast of the junction of Highways VA-675 and VA-601, about 0.5 mile southeast of Glenwood Church, in an area planted with Christmas trees; Middle Fox Creek, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 42 minutes 49.00 seconds N. and long. 81 degrees 20 minutes 24.00 seconds W.

Ap—0 to 4 inches; dark brown (7.5YR 3/4) channery silt loam; weak fine granular structure; friable; many very fine and fine roots; 25 percent channers; very strongly acid; clear wavy boundary.

Bw—4 to 19 inches; brown (7.5YR 4/4) very channery silt loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; 40 percent channers; very strongly acid; gradual wavy boundary.

C—19 to 23 inches; brown (7.5YR 4/4) extremely channery silt loam; massive; friable, slightly sticky, slightly plastic; 70 percent channers; very strongly acid; clear smooth boundary.

R—23 inches; hard rhythmite bedrock.

Range in Characteristics

Solum thickness: 10 to 30 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 15 to 35 percent in the A horizon, 15 to 80 percent in the B horizon, and 35 to 95 percent in the C horizon; the particle-size control section averages more than 35 percent rock fragments
Reaction: Extremely acid to moderately acid in unlimed areas

A horizon:
Hue—5YR to 10YR
Value—3 or 4

Chroma—2 to 4
Fine-earth texture—silt loam

Bw horizon:
Hue—5YR to 10YR
Value—3 or 4
Chroma—3 to 6
Fine-earth texture—silt loam or loam

C horizon:
Hue—5YR to 10YR
Value—4 or 5
Chroma—3 to 6
Fine-earth texture—silt loam or loam

McCamy Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills
Parent material: Residuum weathered from metasandstone and/or phyllite
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Moderately deep
Slope range: 7 to 55 percent

Associated Soils

- Sylvatus and Unicoi soils, which are shallow to hard bedrock and have less clay and more rock fragments in the subsoil than the McCamy soils
- Konnarock and Sylco soils, which have less clay and more rock fragments in the subsoil than the McCamy soils

Taxonomic Classification

Fine-loamy, siliceous, semiactive, mesic Typic Hapludults

Typical Pedon

McCamy fine sandy loam, 7 to 35 percent slopes, very stony; in Grayson County, Virginia, about 3.0 miles northeast of Flatridge, about 1.0 mile northeast of the junction of Highways VA-675 and VA-846, about 0.5 mile west of VA-672, in a hardwood forest; Middle Fox Creek, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 44 minutes 11.00 seconds N. and long. 81 degrees 18 minutes 58.00 seconds W.

Oe—0 to 1 inch; moderately decomposed plant material.
A—1 to 5 inches; brown (7.5YR 4/4) fine sandy loam; weak medium granular structure; very friable; many fine and medium and many coarse roots; 5 percent metasandstone gravel; extremely acid; abrupt wavy boundary.
BA—5 to 9 inches; brown (7.5YR 5/4) fine sandy loam; weak fine subangular blocky structure; friable; common fine and medium and common coarse roots; 5 percent metasandstone gravel; very strongly acid; clear wavy boundary.
Bt—9 to 23 inches; yellowish red (5YR 5/6) sandy clay loam; weak medium subangular blocky structure; friable; few fine and medium and few coarse roots; few faint clay films on all faces of peds; 10 percent metasandstone gravel; very strongly acid; abrupt wavy boundary.
C—23 to 26 inches; yellowish red (5YR 5/6) gravelly sandy loam; massive; very friable; 20 percent metasandstone gravel; strongly acid; clear wavy boundary.

Cr—26 to 31 inches; metasandstone bedrock that is weathered, multicolored, and rippable.
R—31 inches; hard metasandstone bedrock.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 0 to 15 percent in the A horizon, 0 to 30 percent in the B horizon, and 5 to 50 percent in the C horizon
Reaction: Extremely acid to strongly acid in unlimed areas

A horizon:
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—2 to 4
Texture—fine sandy loam

BA horizon and BE or E horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 6
Fine-earth texture—loam, fine sandy loam, or sandy loam

Bt horizon:
Hue—5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, clay loam, or sandy clay loam

C horizon or BC horizon (if it occurs):
Hue—2.5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loamy sand, sandy loam, fine sandy loam, loam, sandy clay loam, clay loam, or possibly clay (in areas that have low-grade phyllite interbeds)

Cr horizon:
Bedrock—multicolored, weathered, and fractured metasedimentary rock, such as low-grade metasandstone and phyllite

The range in characteristics of the Official Series Description for the McCamy series indicates that color hues in the A and BA horizons are 10YR or 2.5Y. The McCamy soils in this survey area include hue of 7.5YR in these horizons. This deviation does not affect interpretations or classification.

Mt Rogers Series

Physiographic province: Blue Ridge
Landform: Ridges and knobs on high mountains
Parent material: Colluvium and/or creep deposits derived from rhyolite
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Very deep
Slope range: 7 to 80 percent

Associated Soils

- Bloodyhorse soils, which are moderately deep to hard bedrock
- Buzzrock soils, which are deep to hard bedrock

Taxonomic Classification

Loamy-skeletal, isotic, frigid Humic Dystrudepts

Typical Pedon

Mt Rogers gravelly loam; in the Jefferson National Forest; about 3.0 miles southwest of Troutdale, Virginia, about 3.6 miles southwest of the junction of Highways US-16 and VA-603, about 0.9 mile southeast of the “Scales” on Pine Mountain, in a pasture; Trout Dale, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 39 minutes 32.00 seconds N. and long. 81 degrees 28 minutes 47.00 seconds W.

A1—0 to 10 inches; black (10YR 2/1) gravelly loam, very dark grayish brown (10YR 3/2) dry; moderate medium granular structure; very friable; common fine roots; 5 percent cobbles and 20 percent gravel; very strongly acid; clear wavy boundary.

A2—10 to 16 inches; very dark grayish brown (10YR 3/2) gravelly loam, pale brown (10YR 6/3) dry; weak fine subangular blocky structure; very friable; few fine roots; 5 percent cobbles and 25 percent gravel; very strongly acid; gradual wavy boundary.

Bw—16 to 33 inches; dark brown (10YR 3/3) very cobbly loam, pale brown (10YR 6/3) dry; weak fine subangular blocky structure; very friable; few fine roots; 25 percent gravel and 25 percent cobbles; very strongly acid; gradual wavy boundary.

C—33 to 62 inches; dark yellowish brown (10YR 4/4) extremely cobbly coarse sandy loam; massive; very friable; 25 percent gravel and 40 percent cobbles; very strongly acid.

Range in Characteristics

Solum thickness: 25 to 60 inches
Depth to bedrock: More than 60 inches
Rock fragments: 20 to 35 percent in the A horizon, 35 to 90 percent in the B horizon, and 50 to 90 percent in the C horizon
Reaction: Extremely acid to moderately acid

A horizon:
Hue—7.5YR to 2.5Y
Value—2 or 3
Chroma—0 to 3
Fine-earth texture—loam

Bw horizon:
Hue—7.5YR to 2.5Y
Value—3 to 6
Chroma—2 to 8
Fine-earth texture—fine sandy loam, sandy loam, loam, or silt loam

C horizon:
Hue—7.5YR to 2.5Y
Value—3 to 6
Chroma—2 to 8
Fine-earth texture—fine sandy loam, sandy loam, loam, or silt loam

Nopan Series

Physiographic province: Blue Ridge
Landform: Coves, benches, and saddles; on high mountains
Parent material: Colluvium derived from rhyolite
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Low
Depth class: Very deep
Slope range: 15 to 55 percent

Associated Soils

- Balsam and Mt Rogers soils, which are well drained and have more rock fragments in the subsoil than the Nopan soils
- Buzzrock soils, which are well drained, are deep to hard bedrock, and have more rock fragments in the subsoil than the Nopan soils
- Bloodyhorse soils, which are well drained, are moderately deep to hard bedrock, and have more rock fragments in the subsoil than the Nopan soils

Taxonomic Classification

Coarse-loamy, mixed, active, acid, frigid Typic Epiaquepts

Typical Pedon

Nopan loam; in the Jefferson National Forest; about 4.0 miles northeast of Whitetop, Virginia, about 2.3 miles northwest of the junction of Highway VA-362 (the main road for Grayson Highlands State Park) and the campground road, 2.3 miles east of Elk Garden, in a pasture; Whitetop Mountain, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 38 minutes 44.00 seconds N. and long. 81 degrees 32 minutes 31.00 seconds W.

A—0 to 6 inches; very dark gray (10YR 3/1) loam; weak fine granular structure; very friable, slightly sticky, slightly plastic; common very fine and fine roots; 5 percent gravel and 5 percent cobbles; strongly acid; clear wavy boundary.

Bg1—6 to 17 inches; gray (10YR 5/1) loam; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; few very fine and fine roots; 5 percent gravel and 5 percent cobbles; strongly acid; clear wavy boundary.

Bg2—17 to 33 inches; grayish brown (10YR 5/2) loamy sand; weak medium subangular blocky structure; friable; few very fine and fine roots; yellowish brown (10YR 5/4) masses of oxidized iron; 10 percent gravel; strongly acid; gradual wavy boundary.

Bh1—33 to 44 inches; brown (10YR 4/3) sandy loam; weak medium subangular blocky structure; firm; dark yellowish brown (10YR 4/6) organic stains on surfaces along pores; 10 percent gravel; strongly acid; gradual wavy boundary.

Bh2—44 to 50 inches; dark brown (7.5YR 3/4) and black (10YR 2/1) sandy loam; weak medium subangular blocky structure; firm; 10 percent gravel; strongly acid; clear wavy boundary.

C—50 to 62 inches; yellowish brown (10YR 5/4) sandy loam; massive; firm; yellowish brown (10YR 5/8) masses of oxidized iron; 10 percent gravel; strongly acid.

Range in Characteristics

Solum thickness: 20 to 60 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 35 percent throughout the profile
Reaction: Extremely acid to strongly acid

O horizon (if it occurs):
Hue—7.5YR, 10YR, 2.5Y, or neutral
Value—2 or 3
Chroma—0 or 1
Fine-earth texture—hemic or sapric material

A horizon:
Hue—10YR or 2.5Y
Value—2 or 3
Chroma—1 or 2
Fine-earth texture—loam

Bg horizon:
Hue—10YR or 2.5Y
Value—4 to 6
Chroma—1 or 2
Redoximorphic features—in shades of brown and gray
Fine-earth texture—loamy sand, sandy loam, or loam

Bh horizon:
Hue—7.5YR to 2.5Y
Value—2 to 6
Chroma—1 to 4
Fine-earth texture—loamy sand, sandy loam, or loam

C horizon:
Hue—7.5YR to 2.5Y
Value—4 to 6
Chroma—3 to 6
Redoximorphic features—in shades of brown and gray
Fine-earth texture—loamy sand, sandy loam, or loam

Peaks Series

Physiographic province: Blue Ridge
Landform: Ridges and knobs on low mountains and foothills
Parent material: Residuum weathered from granite, gneiss, and/or schist
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 7 to 90 percent

Associated Soils

- Cowee and Pigeonroost soils, which have more clay and fewer rock fragments in the subsoil than the Peaks soils
- Chestnut soils, which have fewer rock fragments in the subsoil than the Peaks soils
- Edneyville soils, which are very deep to bedrock and have fewer rock fragments in the subsoil than the Peaks soils

Taxonomic Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Typical Pedon

Peaks very gravelly loam, 35 to 55 percent slopes, extremely stony (fig. 20); in Grayson County, Virginia; about 3.4 miles east-southeast of Troutdale, on Razor Ridge

Figure 20.—An example of a Peaks soil. Bedrock is at a depth of about 34 inches. Rock fragments exceed 35 percent throughout the profile. Depth is marked in inches.

about 0.6 mile southeast of Razor Ridge Church, about 0.65 mile southeast of the junction of Highways VA-672 and VA-677, in a pasture; Trout Dale, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 41 minutes 7.00 seconds N. and long. 81 degrees 22 minutes 55.00 seconds W.

Oe—0 to 1 inch; moderately decomposed plant material.

Ap—1 to 4 inches; dark yellowish brown (10YR 3/4) very gravelly loam; moderate fine granular structure; friable; many very fine roots; 45 percent gravel; strongly acid; clear smooth boundary.

E—4 to 8 inches; dark yellowish brown (10YR 4/4) very gravelly loam; weak fine

granular structure; friable, nonsticky, nonplastic; common very fine and fine roots; 45 percent gravel; very strongly acid; abrupt smooth boundary.

Bw—8 to 23 inches; yellowish brown (10YR 5/4) very gravelly loam; weak fine subangular blocky structure; friable, slightly sticky, nonplastic; few very fine and fine roots; 55 percent gravel; very strongly acid; gradual smooth boundary.

C—23 to 32 inches; yellowish brown (10YR 5/4) extremely gravelly sandy loam; massive; friable, nonsticky, nonplastic; 75 percent gravel; very strongly acid; abrupt smooth boundary.

R—32 inches; hard gneiss bedrock.

Range in Characteristics

Solum thickness: 14 to 38 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 35 to 55 percent in the A horizon, 15 to 55 percent in the E horizon, 35 to 60 percent in the B horizon, and 35 to 75 percent in the C horizon
Reaction: Very strongly acid to moderately acid in unlimed areas

A horizon:
Hue—7.5YR or 10YR
Value—2 to 4
Chroma—2 to 4
Fine-earth texture—loam

E horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 or 4
Fine-earth texture—loam, fine sandy loam, or sandy loam

Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—4 to 8
Fine-earth texture—loam, fine sandy loam, or sandy loam

C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, fine sandy loam, sandy loam, or loamy sand

Pigeonroost Series

Physiographic province: Blue Ridge
Landform: Ridges, hills, and spurs on low mountains and foothills
Parent material: Residuum weathered from gneiss, schist, and/or granite
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Moderately deep
Slope range: 7 to 55 percent

Associated Soils

- Edneytown soils, which are very deep to bedrock
- Edneyville soils, which are very deep to bedrock and have less clay in the subsoil than the Pigeonroost soils

- Clifford soils, which are very deep to bedrock and have more clay in the subsoil than the Pigeonroost soils
- Peaks soils, which have less clay and more rock fragments in the subsoil than the Pigeonroost soils

Taxonomic Classification

Fine-loamy, mixed, active, mesic Typic Hapludults

Typical Pedon

Pigeonroost loam, 15 to 35 percent slopes; in Grayson County, Virginia; about 2.25 miles south-southeast of Providence, about 0.45 mile northeast of the junction of Highways VA-637 and VA-636, about 0.9 mile northwest of the junction of Highways VA-637 and 631, in a pasture; Brierpatch Mountain, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 39 minutes 55.00 seconds N. and long. 81 degrees 1 minute 46.00 seconds W.

A—0 to 5 inches; dark yellowish brown (10YR 3/4) loam; weak fine granular structure; friable; many very fine and fine roots; strongly acid; abrupt smooth boundary.

Bt—5 to 24 inches; strong brown (7.5YR 5/8) clay loam; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; common distinct clay films on all faces of peds; very strongly acid; clear wavy boundary.

BC—24 to 37 inches; strong brown (7.5YR 5/8) sandy loam; weak fine subangular blocky structure; friable, slightly sticky, nonplastic; few very fine roots; very strongly acid; abrupt wavy boundary.

Cr—37 inches; gneiss bedrock that is weathered, multicolored, and rippable.

Range in Characteristics

Solum thickness: 15 to 40 inches

Depth to bedrock: 20 to 40 inches to soft bedrock; more than 60 inches to hard bedrock

Rock fragments: 0 to 35 percent in the A horizon and 0 to 15 percent in the B and C horizons

Reaction: Extremely acid to moderately acid in unlimed areas

Ap horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—2 to 6
Fine-earth texture—loam

BA or BE horizon (if it occurs):
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—3 to 6
Texture—loam, sandy loam, fine sandy loam, or sandy clay loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Texture—sandy clay loam, loam, clay loam, or silty clay loam

BC horizon or CB horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 to 8

Chroma—3 to 8
Texture—sandy loam, fine sandy loam, loam, or sandy clay loam

C horizon (if it occurs):
Hue—5YR to 10YR
Value—3 to 8
Chroma—3 to 8
Texture—sandy loam, fine sandy loam, loam, or sandy clay loam

Cr horizon:
Bedrock—weathered, multicolored, high-grade metamorphic or igneous rock, such as gneiss or granite, that is rippable

Pineola Series

Physiographic province: Blue Ridge
Landform: Ridges and hills on low mountains and foothills
Parent material: Residuum weathered from metasandstone, metagraywacke, and/or phyllite
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Moderately deep
Slope range: 15 to 55 percent

Associated Soils

- Burton soils, which have less clay in the subsoil than the Pineola soils; at higher elevations
- Pigeonroost soils, which have a thinner or lighter colored surface layer than the Pineola soils

Taxonomic Classification

Fine-loamy, mixed, active, mesic Humic Hapludults

Typical Pedon

Pineola loam, 15 to 35 percent slopes; in Grayson County, Virginia; about 2.15 miles southwest of Whitetop, about 2.1 miles southwest of the junction of Highways VA-755 and VA-726, about 0.83 mile northeast of the North Carolina Corner, about 2.19 miles west of Whitetop Cemetery, in an abandoned pasture; Grayson, Tennessee USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 35 minutes 45.00 seconds N. and long. 81 degrees 39 minutes 59.00 seconds W.

A—0 to 10 inches; very dark grayish brown (10YR 3/2) loam; weak fine granular structure; very friable; many fine and common medium roots; 10 percent gravel; strongly acid; clear wavy boundary.
BA—10 to 15 inches; brown (10YR 4/3) loam; weak medium subangular blocky structure; friable, slightly sticky, nonplastic; many fine and few medium roots; 10 percent gravel; strongly acid; gradual wavy boundary.
Bt—15 to 26 inches; yellowish brown (10YR 5/6) gravelly clay loam; moderate fine subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and few medium roots; common distinct clay films on all faces of peds; 15 percent gravel; strongly acid; clear wavy boundary.
C—26 to 29 inches; yellowish brown (10YR 5/6) gravelly sandy loam; massive; friable, slightly sticky, nonplastic; few very fine and fine roots; 25 percent gravel; strongly acid; abrupt wavy boundary.
Cr—29 inches; metagraywacke bedrock; weathered and rippable.

Range in Characteristics

Solum thickness: 15 to 39 inches
Depth to bedrock: 20 to 40 inches to soft bedrock; more than 60 inches to hard bedrock
Rock fragments: 0 to 15 percent in the A horizon, 0 to 35 percent in the B horizon, and 0 to 50 percent in the C horizon
Reaction: Extremely acid to moderately acid in unlimed areas

A or Ap horizon:
Hue—7.5YR or 10YR
Value—2 or 3
Chroma—1 to 4
Texture—loam

BA horizon or AB horizon (if it occurs):
Hue—7.5YR or 10YR
Value—3 or 4
Chroma—2 to 6
Fine-earth texture—loam, sandy loam, fine sandy loam, or silt loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—sandy clay loam, loam, clay loam, or silty clay loam

BC horizon (if it occurs):
Hue—7.5YR or 10YR
Value—4 to 7
Chroma—4 to 8
Fine-earth texture—sandy loam, fine sandy loam, loam, or silt loam

C horizon:
Hue—7.5YR or 10YR
Value—3 to 8
Chroma—1 to 8
Fine-earth texture—sandy loam, fine sandy loam, loam, or silt loam

Cr horizon:
Bedrock—weathered, multicolored, low-grade metasedimentary rock, such as metagraywacke or metasandstone, that is rippable

Scales Series

Physiographic province: Blue Ridge
Landform: Coves, saddles, and benches on high mountains
Parent material: Organic material over colluvium derived from rhyolite
Drainage class: Poorly drained
Slowest saturated hydraulic conductivity: Moderately low
Depth class: Very deep
Slope range: 0 to 7 percent

Associated Soils

- Balsam soils, which are well drained and have more rock fragments in the subsoil than the Scales soils
- Nopan soils, which do not have a thick organic surface layer

Taxonomic Classification

Loamy, mixed, superactive, acid, frigid, shallow Histic Humaquepts

Typical Pedon

Scales mucky peak; in the Jefferson National Forest; about 3.5 miles southwest of Troutdale, Virginia, about 3.3 miles southwest of the junction of Highways VA-16 and VA-603, about 0.1 mile southeast of the gate at the “Scales” on Pine Mountain, in a pasture; Trout Dale, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 40 minutes 9.00 seconds N. and long. 81 degrees 29 minutes 13.00 seconds W.

Oi—0 to 2 inches; black (10YR 2/1) peat.

Oe—2 to 11 inches; black (10YR 2/1) mucky peat.

2Cg—11 to 21 inches; grayish brown (10YR 5/2) gravelly sandy clay loam; massive; friable; few fine roots; few fine distinct light olive brown (2.5Y 5/4) masses of oxidized iron; 30 percent gravel; strongly acid; clear smooth boundary.

3Cd1—21 to 33 inches; light olive brown (2.5Y 5/3) clay loam; massive; firm, slightly sticky, nonplastic; common fine prominent yellowish brown (10YR 5/8) masses of oxidized iron; 10 percent gravel; very strongly acid; gradual wavy boundary.

3Cd2—33 to 43 inches; light olive brown (2.5Y 5/4) gravelly clay loam; massive; firm, slightly sticky, nonplastic; few medium prominent yellowish brown (10YR 5/8, moist) masses of oxidized iron; 20 percent gravel; very strongly acid; gradual wavy boundary.

3Cd3—43 to 62 inches; yellowish brown (10YR 5/6) gravelly clay loam; massive; firm, moderately sticky, moderately plastic; few medium distinct yellowish brown (10YR 5/8) masses of oxidized iron; 20 percent gravel; very strongly acid.

Range in Characteristics

Solum thickness: 0 to 20 inches
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 35 percent in the O and A horizons and 5 to 35 percent in the C horizon; some pedons have thin layers of gravel in the upper part of the C horizon
Reaction: Very strongly acid to moderately acid

O horizon:
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Fine-earth texture—fibric, hemic, or sapric material

A horizon (if it occurs):
Hue—10YR
Value—2 or 3
Chroma—1 or 2
Fine-earth texture—loamy sand, sandy loam, fine sandy loam, loam, or silt loam; mucky analogues of these textures are common

Cg horizon:
Hue—10YR to 5Y
Value—4 to 6
Chroma—1 or 2
Redoximorpic features—in shades of gray and brown
Fine-earth texture—loamy sand, sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam

Cd horizon:
Hue—10YR to 5Y

Value—4 to 6
Chroma—3 to 8
Redoximorpic features—in shades of gray and brown
Fine-earth texture—sandy loam, fine sandy loam, loam, sandy clay loam, or clay loam

Sylco Series

Physiographic province: Blue Ridge
Landform: Ridges and knobs on low mountains and foothills
Parent material: Residuum weathered from phyllite and metasandstone
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: High
Depth class: Moderately deep
Slope range: 7 to 55 percent

Associated Soils

- Sylvatus and Unicoi soils, which are shallow to hard bedrock
- McCamy soils, which have more clay and fewer rock fragments in the subsoil than the Sylco soils

Taxonomic Classification

Loamy-skeletal, mixed, active, mesic Typic Dystrudepts

Typical Pedon

Sylco channery silt loam in an area of Sylco-Sylvatus complex, 7 to 15 percent slopes; in Grayson County, Virginia; about 3.5 miles southeast of Cripple Creek, about 2.0 miles west of the junction of Highways VA-602 and VA-738, about 2.0 miles east of the junction of Highways VA-653 and VA-602, about 0.2 mile north of Cold Springs Church and cemetery, in a pasture; Cripple Creek, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 47 minutes 5.00 seconds N. and long. 81 degrees 2 minutes 37.00 seconds W.

A—0 to 4 inches; dark yellowish brown (10YR 4/4) channery silt loam; weak medium granular structure; friable; many very fine roots; 20 percent channers; strongly acid; abrupt smooth boundary.
Bw—4 to 22 inches; brown (7.5YR 5/4) very channery silt loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine roots; 45 percent channers; strongly acid; clear smooth boundary.
C—22 to 27 inches; brown (7.5YR 5/4) extremely channery silt loam; massive; friable, slightly sticky, slightly plastic; few fine roots; 70 percent channers; strongly acid; clear wavy boundary.
R—27 inches; hard phyllite bedrock.

Range in Characteristics

Solum thickness: 20 to 40 inches
Depth to bedrock: 20 to 40 inches
Rock fragments: 15 to 35 percent in the A horizon, 15 to 45 percent in the B horizon, and 40 to 70 percent in the C horizon
Reaction: Extremely acid to strongly acid in unlimed areas

A horizon:
Hue—10YR
Value—3 or 4

Chroma—2 to 4
Fine-earth texture—silt loam

Bw horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 6
Fine-earth texture—silt loam, loam, or silty clay loam

C horizon:
Hue—7.5YR or 10YR
Value—3 to 5
Chroma—3 to 6
Fine-earth texture—silt loam, loam, or silty clay loam

Sylvatus Series

Physiographic province: Blue Ridge
Landform: Ridges and knobs on low mountains and foothills
Parent material: Residuum weathered from phyllite and metasandstone
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Shallow
Slope range: 7 to 55 percent

Associated Soils

- Sylco soils, which are moderately deep to hard bedrock
- Unicoi soils, which have less silt and more sand in the subsoil than the Sylvatus soils
- McCamy soils, which are moderately deep to hard bedrock and have more clay and fewer rock fragments in the subsoil than the Sylvatus soils

Taxonomic Classification

Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts

Typical Pedon

Sylvatus channery silt loam in an area of Sylco-Sylvatus complex, 15 to 35 percent slopes; in Grayson County, Virginia; about 3.0 miles southeast of Cripple Creek, about 0.7 mile east of the junction of Highways VA-602 and VA-653, about 2.0 miles west of Faith Church, about 0.75 mile south of the Wythe County line, in a pasture; Cripple Creek, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 46 minutes 59.00 seconds N. and long. 81 degrees 4 minutes 12.00 seconds W.

A—0 to 2 inches; dark yellowish brown (10YR 3/4) channery silt loam; weak fine granular structure; friable; many very fine and fine roots; 20 percent channers; very strongly acid; abrupt smooth boundary.
Bw—2 to 11 inches; yellowish brown (10YR 5/6) very channery silt loam; weak fine and medium subangular blocky structure; friable, slightly sticky, slightly plastic; common very fine and fine roots; 50 percent channers; very strongly acid; clear smooth boundary.
C—11 to 16 inches; yellowish brown (10YR 5/6) extremely channery silt loam; massive; friable, slightly sticky, slightly plastic; 70 percent channers; very strongly acid; clear wavy boundary.
R—16 inches; hard phyllite bedrock.

Range in Characteristics

Solum thickness: 10 to 18 inches
Depth to bedrock: 10 to 20 inches
Rock fragments: 15 to 35 percent in the A horizon, 15 to 75 percent in the B horizon, and 45 to 90 percent in the C horizon
Reaction: Extremely acid or very strongly acid in unlimed areas

A horizon:
Hue—10YR
Value—2 to 5
Chroma—1 to 4
Fine-earth texture—silt loam

Bw horizon:
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—4 to 8
Fine-earth texture—silt loam, loam, silty clay loam, or clay loam

C horizon:
Hue—7.5YR or 10YR
Value—3 to 6
Chroma—1 to 8
Fine-earth texture—silt loam, loam, silty clay loam, or clay loam

Tate Series

Physiographic province: Blue Ridge
Landform: Coves, benches, and saddles on low mountains and foothills
Parent material: Colluvium and/or alluvium derived from igneous and metamorphic rock
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 2 to 55 percent

Associated Soils

- Delanco soils, which are moderately well drained
- Codorus soils, which are somewhat poorly drained and have less clay in the subsoil than the Tate soils
- Hatboro soils, which are poorly drained and have less clay in the subsoil than the Tate soils

Taxonomic Classification

Fine-loamy, mixed, semiactive, mesic Typic Hapludults

Typical Pedon

Tate loam, 7 to 15 percent slopes (fig. 21); in Grayson County, Virginia; about 3.75 miles northwest of Fries, about 0.35 mile northeast of the junction of Highways VA-604 and VA-644, about 0.85 mile northeast of the junction of Highways VA-604 and VA-646, in an alfalfa field; Brierpatch Mountain, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 44 minutes 44.00 seconds N. and long. 81 degrees 0 minutes 20.00 seconds W.

Ap—0 to 6 inches; dark yellowish brown (10YR 4/4) loam; moderate very fine granular

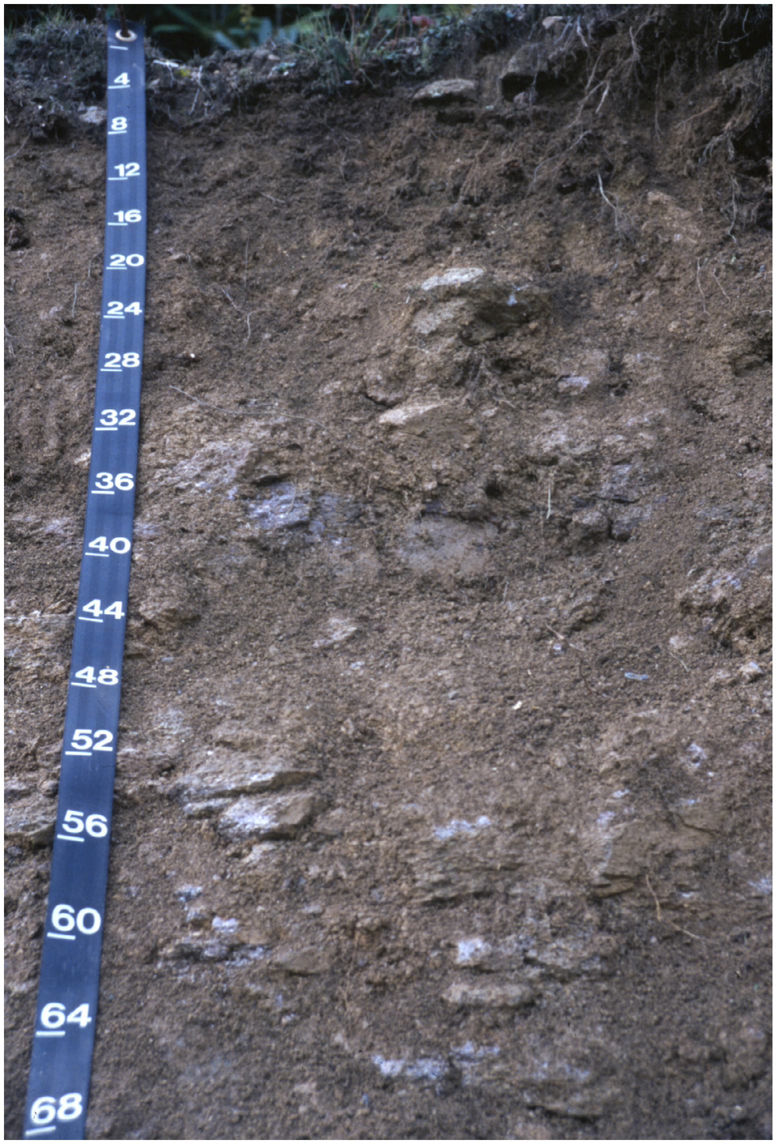


Figure 21.—An example of a Tate soil. The average content of semi-rounded rock fragments is as much as 35 percent in the solum and as much as 60 percent in the substratum. Depth to bedrock is more than 60 inches. Depth is marked in inches.

structure; friable; few medium and many very fine roots; few fine mica flakes; moderately acid; abrupt wavy boundary.

BA—6 to 12 inches; brown (7.5YR 5/4) sandy loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few medium and common very fine roots; few fine mica flakes; moderately acid; abrupt smooth boundary.

Bt—12 to 27 inches; strong brown (7.5YR 5/6) clay loam; moderate medium subangular blocky structure; firm, slightly sticky, slightly plastic; few very fine and fine roots; common discontinuous clay films on all faces of peds; common fine mica flakes; strongly acid; clear wavy boundary.

BC—27 to 47 inches; strong brown (7.5YR 5/6) sandy clay loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; common fine mica flakes; 2

percent gneiss gravel and 3 percent quartz gravel; strongly acid; clear wavy boundary.

C—47 to 62 inches; strong brown (7.5YR 5/6) sandy loam; massive; friable, slightly sticky, slightly plastic; common fine mica flakes; 5 percent gneiss gravel and 5 percent quartz gravel; strongly acid.

Range in Characteristics

Solum thickness: 24 to 60 inches or more
Depth to bedrock: More than 60 inches
Rock fragments: 0 to 15 percent in the A horizon, 0 to 35 percent in the BA and Bt horizons, and 5 to 60 percent in the BC and C horizons
Reaction: Very strongly acid to slightly acid in unlimed areas

Ap horizon:
Hue—10YR
Value—3 to 5
Chroma—2 to 4
Texture—loam

BA horizon:
Hue—7.5YR or 10YR
Value—4 or 5
Chroma—3 to 6
Fine-earth texture—loam, fine sandy loam, sandy loam, sandy clay loam, or clay loam

Bt horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, clay loam, or sandy clay loam

BC horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, sandy loam, fine sandy loam, or sandy clay loam

C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, sandy loam, fine sandy loam, sandy clay loam, or loamy sand

Thunder Series

Physiographic province: Blue Ridge
Landform: Benches, coves, and saddles on low mountains and foothills
Parent material: Colluvium derived from rhyolite
Drainage class: Well drained
Slowest saturated hydraulic conductivity: Moderately high
Depth class: Very deep
Slope range: 2 to 55 percent

Associated Soils

- Tate soils, which have more clay and fewer rock fragments in the subsoil than the Thunder soils and have a thinner or lighter colored surface layer
- Cullasaja soils, which have less clay in the subsoil than the Thunder soils and a thicker dark surface layer
- Greenlee soils, which have less clay in the subsoil than the Thunder soils and a thinner dark surface layer

Taxonomic Classification

Loamy-skeletal, mixed, active, mesic Humic Hapludults

Typical Pedon

Thunder cobbly loam, 15 to 35 percent slopes, very bouldery; in Grayson County, Virginia; about 2.64 miles northwest of Rugby, about 1.85 miles north of the junction of Highways US-58 and VA-362, about 0.64 mile east of the junction of Grayson Highlands State Park campground road and Highway VA-362, on the campground road, 0.25 mile west of the campground, in a hardwood forest; Trout Dale, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 38 minutes 18.00 seconds N. and long. 81 degrees 29 minutes 35.00 seconds W.

Oe—0 to 1 inch; moderately decomposed plant material; 10 percent gravel and 15 percent cobbles.

A1—1 to 5 inches; very dark gray (10YR 3/1) cobbly loam; moderate medium granular structure; friable; many fine and medium and few coarse roots; 10 percent gravel and 15 percent cobbles; strongly acid; clear wavy boundary.

A2—5 to 12 inches; dark brown (10YR 3/3) very cobbly loam; moderate fine granular structure; friable, slightly sticky, slightly plastic; common fine and medium and few coarse roots; 10 percent gravel and 25 percent cobbles; strongly acid; clear wavy boundary.

E—12 to 21 inches; brown (10YR 4/3) very cobbly loam; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium and few coarse roots; 10 percent gravel and 30 percent cobbles; strongly acid; abrupt wavy boundary.

Bt1—21 to 32 inches; yellowish brown (10YR 5/6) very cobbly sandy clay loam; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; few fine, medium, and coarse roots; few faint clay films on all faces of peds; 15 percent gravel and 30 percent cobbles; strongly acid; gradual wavy boundary.

Bt2—32 to 50 inches; yellowish brown (10YR 5/6) very cobbly sandy clay loam; moderate medium subangular blocky structure; friable, slightly sticky, slightly plastic; few fine, medium, and coarse roots; common faint clay films on all faces of peds; 15 percent gravel and 35 percent cobbles; strongly acid; clear wavy boundary.

BC—50 to 62 inches; yellowish brown (10YR 5/6) extremely cobbly sandy loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; 25 percent gravel and 35 percent cobbles; strongly acid.

Range in Characteristics

Solum thickness: More than 50 inches
Depth to bedrock: More than 60 inches
Rock fragments: 15 to 60 percent in the A horizon, 25 to 85 percent in the E horizon, and 35 to 85 percent in the B and C horizons
Reaction: Strongly acid to slightly acid in unlimed areas

A horizon:
Hue—10YR

Value—2 to 4
Chroma—1 to 3
Fine-earth texture—loam

E horizon:
Hue—10YR
Value—4 or 5
Chroma—3 to 6
Fine-earth texture—loam or sandy loam

Bt horizon:
Hue—5YR to 10YR
Value—4 to 6
Chroma—4 to 8
Fine-earth texture—loam, clay loam, or sandy clay loam

BC horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—6 to 8
Fine-earth texture—sandy loam, sandy clay loam, or clay loam

C horizon (if it occurs):
Hue—7.5YR or 10YR
Value—5 or 6
Chroma—6 to 8
Fine-earth texture—loamy sand or sandy loam

Tuckasegee Series

Physiographic province: Blue Ridge
Landform: Coves and saddles on low mountains and foothills
Parent material: Colluvium derived from igneous and metamorphic rock
Drainage class: Well drained
Slowest saturated hydraulic conductivity: High
Depth class: Very deep
Slope range: 45 to 90 percent

Associated Soils

- Chestnut soils, which are moderately deep to soft bedrock
- Peaks soils, which are moderately deep to hard bedrock and have more rock fragments in the subsoil than the Tuckasegee soils
- Cowee soils, which are moderately deep to soft bedrock and have more clay in the subsoil than the Tuckasegee soils

Taxonomic Classification

Fine-loamy, isotic, mesic Humic Dystrudepts

Typical Pedon

Tuckasegee gravelly loam; in Surry County, North Carolina; about 4 miles southwest of Low Gap, 0.6 mile south of intersection of Alleghany County Secondary Roads 1462 and 1461 on Secondary Road 1462 into Surry County, 1.3 miles south on a woods road, 0.8 mile east on an adjoining woods road, 500 feet east of the road in hardwood forest; Roaring Gap, North Carolina USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 29 minutes 15.00 seconds N. and long. 80 degrees 54 minutes 50.00 seconds W.

A1—0 to 8 inches; very dark brown (10YR 2/2) gravelly loam, brown (10YR 4/3) dry; weak medium granular structure; friable, nonsticky, nonplastic; many fine, medium, and coarse roots; few fine tubular pores; few fine mica flakes; 1 percent gneiss stones, 5 percent quartz gravel, and 10 percent gneiss gravel; moderately acid; clear wavy boundary.

A2—8 to 13 inches; very dark grayish brown (10YR 3/2) gravelly loam, dark yellowish brown (10YR 4/4) dry; weak medium granular structure; friable, nonsticky, nonplastic; common fine, medium, and coarse roots; few fine tubular pores; few fine mica flakes; 5 percent quartz gravel and 10 percent gneiss gravel; moderately acid; gradual wavy boundary.

Bw1—13 to 28 inches; brown (7.5YR 4/4) gravelly loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few medium and coarse roots; few fine tubular pores; common fine mica flakes; 5 percent quartz gravel and 10 percent gneiss gravel; moderately acid; gradual wavy boundary.

Bw2—28 to 47 inches; strong brown (7.5YR 4/6) gravelly loam; weak medium subangular blocky structure; friable, slightly sticky, slightly plastic; few medium and coarse roots; few fine tubular pores; common fine mica flakes; 5 percent quartz gravel and 15 percent gneiss gravel; strongly acid; gradual wavy boundary.

BC—47 to 79 inches; strong brown (7.5YR 5/6) very gravelly loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; few medium and coarse roots; common fine mica flakes; 5 percent quartz gravel, 5 percent gneiss cobbles, 5 percent schist channers, and 20 percent gneiss gravel; strongly acid.

Range in Characteristics

Solum thickness: 40 to more than 60 inches
Depth to bedrock: More than than 72 inches
Rock fragments: 0 to 35 percent in the upper 40 inches of the profile and 0 to 60 percent below a depth of 40 inches
Reaction: Unless areas are limed, very strongly acid to slightly acid in the A horizon and very strongly acid to moderately acid in the B and C horizons

A or Ap horizon:
Hue—5YR to 10YR
Value—2 or 3
Chroma—1 to 3
Fine-earth texture—loam in the surface layer; including loam, sandy loam, and fine sandy loam in subhorizons below the surface layer

Bw horizon:
Hue—5YR to 10YR
Value—3 to 6
Chroma—3 to 8
Fine-earth texture—sandy loam, fine sandy loam, loam, or sandy clay loam

BC horizon:
Hue—5YR to 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—sandy loam, fine sandy loam, loam, or sandy clay loam

C horizon (if it occurs):
Hue—5YR to 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loamy sand, loamy fine sand, sandy loam, fine sandy loam, or loam

Udorthents

Physiographic province: Blue Ridge
Landform: Variable
Parent material: Fill material from a variety of sources
Drainage class: Variable
Slowest saturated hydraulic conductivity: Unspecified
Depth class: Variable
Slope range: 0 to 25 percent

Typical Pedon

The properties and characteristics of Udorthents vary to the extent that there is not a typical profile. Udorthents formed when soils were disturbed by land-leveling, excavation, or filling. They consist of loamy and clayey soil material and varying amounts of rock fragments. Depth to hard bedrock varies from a few inches to more than 5 feet. Areas range from slightly compacted to severely compacted. Unvegetated areas are susceptible to severe erosion. Drainage is variable.

Unicoi Series

Physiographic province: Blue Ridge
Landform: Ridges and knobs on low mountains and foothills
Parent material: Residuum weathered from metasandstone and/or quartzite
Drainage class: Somewhat excessively drained
Slowest saturated hydraulic conductivity: High
Depth class: Shallow
Slope range: 7 to 55 percent

Associated Soils

- Keener soils, which are very deep to bedrock and have more clay and fewer rock fragments in the subsoil than the Unicoi soils
- McCamy soils, which are moderately deep to hard bedrock and have more clay and fewer rock fragments in the subsoil than the Unicoi soils
- Sylco soils, which are moderately deep to hard bedrock
- Sylvatus soils, which have more silt and less sand in the subsoil than the Unicoi soils

Taxonomic Classification

Loamy-skeletal, mixed, semiactive, mesic Lithic Dystrudepts

Typical Pedon

Unicoi very gravelly sandy loam, 35 to 55 percent slopes, extremely stony; in Grayson County, Virginia; about 5 miles south of Cripple Creek, about 0.85 mile south of Jones Knob, about 0.75 mile northeast of the intersection of Highways VA-604 and VA-653, about 1.25 mile east of the Wythe County line, in a mixed hardwood-pine forest; Cripple Creek, Virginia USGS 7.5 Minute Quadrangle, NAD27; lat. 36 degrees 45 minutes 20.00 seconds N. and long. 81 degrees 4 minutes 15.00 seconds W.

Oe—0 to 2 inches; moderately decomposed plant material.

A—2 to 5 inches; brown (10YR 4/3) very gravelly sandy loam; weak fine granular structure; friable; many fine and medium roots; 40 percent gravel; extremely acid; abrupt wavy boundary.

Bw—5 to 14 inches; yellowish brown (10YR 5/6) very gravelly sandy loam; weak fine subangular blocky structure; friable, slightly sticky, slightly plastic; common fine and medium roots; 50 percent gravel; extremely acid; gradual wavy boundary.

C—14 to 19 inches; yellowish brown (10YR 5/6) extremely gravelly sandy loam; massive; friable, slightly sticky, slightly plastic; few fine and medium roots; 60 percent gravel; extremely acid; clear wavy boundary.
R—19 inches; hard metasandstone bedrock.

Range in Characteristics

Solum thickness: 7 to 20 inches
Depth to bedrock: 10 to 20 inches
Rock fragments: 35 to 60 percent thoughout the profile
Reaction: Extremely acid to strongly acid in unlimed areas

A horizon:
Hue—10YR
Value—3 to 6
Chroma—1 to 4
Fine-earth texture—sandy loam

Bw horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam, fine sandy loam, or sandy loam

C horizon:
Hue—7.5YR or 10YR
Value—4 to 6
Chroma—3 to 8
Fine-earth texture—loam, fine sandy loam, or sandy loam

Formation of the Soils

This section describes the factors that have affected the formation of the soils in Grayson County. It also discusses the morphology of the soils and the processes of horizon differentiation.

Factors of Soil Formation

Soil is formed by weathering and other processes that act upon parent material. The characteristics of the soil at any given point depend upon the interaction of the five factors of soil formation. These factors are parent material, climate, plants and animals, relief, and time *(7)*.

Climate and plants and animals are the active forces of soil formation. In this survey area, they act on the parent material that has accumulated through the weathering of rocks and slowly change it into soil. Although all of the five factors affect the formation of every soil, the relative importance of each differs from place to place. In extreme cases one factor may dominate in the formation of a soil and fix most of its properties. Generally, the combined action of the five factors determines the characteristics of each soil.

Parent Material

The unconsolidated mass from which a soil forms is the parent material. It is largely responsible for the chemical and mineralogical composition of the soil and the rate at which soil-forming processes take place. There are three kinds of parent material in Grayson County: residual, alluvial, and colluvial.

Some of the residual parent materials are quartz monzonite, biotite gneiss, granite, mica schist, mica gneiss, metasandstone, quartzite, phyllite, and rhyolite. Soils that formed in residuum from quartz monzonite, biotite gneiss, and granite are the most extensive on ridges and foothills in the central part of the county and have a wide range of characteristics. Soils derived from quartz monzonite, biotite gneiss, and granite typically have a loamy surface layer and a clay loam or sandy clay loam subsoil. Examples are Edneytown, Edneyville, and Pigeonroost soils. Residuum from mica schist and mica gneiss on ridges and foothills in the southeastern part of the county weathered to form the parent material of the loamy textured Glenelg and Cowee soils. The coarse textured granite residuum on mountain ridges in the central part of the county weathered to form the parent material of Peaks soils. Metamorphosed sedimentary rocks, such as metasandstone, phyllite, and quartzite, on mountain ridges along the northern rim of Grayson County, weathered to form the parent material of Sylco, Sylvatus, McCamy, and Unicoi soils. The very resistent rhyolite residuum on high mountains in the western part of the county weathered to form the parent material of Bloodyhorse and Buzzrock soils.

Alluvial parent materials are of local origin along the New River and its tributaries. Soils derived from alluvium have a wide range in texture and development. Examples of such soils are Codorus, Comus, Craigsville, Delanco, Elsinboro, Hatboro, Kinkora, and Braddock.

Colluvial parent materials are dominantly along lower mountain side slopes, in

coves, and on benches. They primarily are moderately coarse textured, medium textured, or moderately fine textured. Examples are Braddock, Delanco, Greenlee, Keener, and Tate soils.

Climate

As a genetic factor, climate affects the physical, chemical, and biological relationships in soils, principally through the influence of precipitation and temperature. Water dissolves minerals and organic residue through the surface layer and subsoil. Temperature determines the types of physical, chemical, and biological activities that take place and the speed at which they act.

Because the precipitation in the county exceeds evapotranspiration, the soils have been leached. Much of the soluble material that originally was present or was released through weathering has been removed. In addition to leaching soluble materials, water that percolates through the soil moves clay from the surface layer to the subsoil. Except for soils that formed in recent alluvium or sand or on very steep slopes, the soils of the county typically contain more clay in the subsoil than in the surface layer.

Also influenced by climate is the formation of blocky structure in the subsoil of well developed soils. The development of peds (aggregates) in the subsoil is caused partly by changes in volume of the soil mass that are primarily the result of alternating periods of wetting and drying.

The climate is uniform throughout most of the county, except for the areas at the higher elevations (over 4,400 feet) in the western part of the county. These areas are significantly colder and, as a result, the soils at these locations contain more organic matter in the surface layer. In other areas of the survey area, the climate’s affect on soil formation may be modified locally by the gradient and aspect of slope.

Plant and Animal Life

Micro-organisms, vegetation, animals, and humans are major factors in the formation of soils. Vegetation is generally responsible for the amount of organic matter in the soil and the color of the surface layer. Earthworms, cicada, and burrowing animals help keep the soil open and porous. Micro-organisms decompose the vegetation and dead animal matter, thus releasing nutrients for plant food.

Before the survey area was settled, the native vegetation was the major living organism affecting soil development. The native vegetation consisted mainly of hardwoods. Oaks, hickories, chestnuts, maples, beech, and birch were the dominant trees in the original forest cover; hemlock and eastern white pine were the most abundant conifers in the cooler areas; red spruce and Fraser fir were confined to the higher elevations. Most hardwoods use a large amount of the available calcium and other bases and constantly recycle them through leaf fall and decay. Coniferous trees recycle smaller amount of bases than deciduous trees; consequently, more bases have been leached from soils that developed under coniferous vegetation than under deciduous vegetation. The soils of the mountainous regions of the county that are underlain by acid parent rock have few remaining bases, even though they developed under a hardwood forest. This is mainly because of the low base content of the original parent material. Because the soils formed under forest vegetation, rapid decay of organic matter and constant recycling of plant nutrients have prevented organic matter from accumulating in large quantities. In addition, the present climate favors rapid decay of plant materials, oxidation of organic matter, and leaching of plant nutrients.

As farming developed in the area, humans became an important factor in the development of the soils. The clearing of the forests, cultivation, introduction of new plants, and changes in natural drainage all have had their effect on soil development. The most important changes brought about by humans are the mixing of the upper

layers of the soil to form a plow layer, the cultivation of steep erodible slopes, and the liming and fertilizing that change the content of plant nutrients, especially in the upper layers of the soils.

Relief

The underlying formations, the geologic history of the general region, and the effects of dissection by rivers and streams largely determine the relief of an area. Relief affects the formation of soils by influencing the rate of surface runoff, the soil temperature, and the geologic erosion. It can alter the effects of climate acting on the parent material to the extent that several different kinds of soil may form from the same kind of parent material. Relief also affects the amount of radiant energy absorbed by the soils, which in turn affects the type of native vegetation.

Relief affects drainage. Runoff from upland areas tends to accumulate in areas of the nearly level flood plains, resulting in a high water table. Poorly drained Hatboro and Kinkora soils are examples of soils in these areas.

The gently sloping to very steep soils generally are well drained or moderately well drained. Geologic erosion is slight, surface runoff is medium to rapid, and the translocation of bases and clay has typically occurred downward through the soil. On the steeper soils, however, surface runoff is very rapid, water infiltration and the translocation of clays and bases throughout the soil are minimized, and geologic erosion has removed soil material almost as fast as it forms.

Time

As a factor of soil formation, time generally is related to the degree of development or degree of horizon differentiation within the soil. A soil that has little or no horizon development is considered a young soil, and one that has strongly developed horizons is considered an old or mature soil.

The oldest soils in the survey area are those that formed in residual material weathered from bedrock. In general, these soils are in less sloping, relatively stable positions and formed in easily weatherable materials. These older soils have a strong degree of horizon differentiation. Hayesville soils are an example. On very steep slopes, geologic erosion removed soil material in a relatively short period and the soils generally have not been in place long enough to develop more than moderate horizon differentiation. Examples are Sylvatus and Unicoi soils. Soils that formed in recent alluvium have been in place only a relatively short time and show little or no development other than an accumulation of organic matter in the surface layer. They commonly are stratified and have an irregular distribution of organic matter. Examples are Comus and Craigsville soils.

Morphology of the Soils

The results of the interaction of the soil-forming factors can be distinguished by the different layers, or horizons, in a soil profile. The soil profile extends from the surface down to materials that are little altered by the soil-forming processes.

Most soils have three major horizons—the A, B, and C horizons. Soils under a forest canopy have an O (organic) horizon at the surface. These major horizons may be further subdivided by the use of numbers and letters to indicate changes within one horizon. An example is a Bt horizon, which is a B horizon that has an accumulation of clay.

The A horizon is the surface layer. It is the layer that has the maximum accumulation of organic matter and that shows a maximum leaching or eluviation of clay and iron. The E horizon is a subsurface layer that has the maximum amount of

leaching of bases and eluviation of clay and iron and is normally the lightest colored horizon in the profile.

The B horizon underlies an A or E horizon and is commonly called the subsoil. It is the horizon of maximum accumulation of clay, iron, aluminum, or other compounds leached from the surface layer. In some soils the B horizon formed by alteration in place rather than by illuviation. The alteration can be caused by oxidation and reduction of iron or by the weathering of clay minerals. The B horizon commonly has blocky or prismatic structure, and it generally is firmer textured and lighter in color than the A horizon but darker than the C horizon or the E horizon.

The C horizon is below the B horizon or, in some instances, below the A horizon. It consists of materials that are little altered by the soil-forming processes.

Processes of Horizon Differentiation

In this survey area several processes are involved in the formation of soil horizons. Among these are the accumulation of organic matter, the leaching of soluble salts, the reduction and transfer of iron, the formation of soil structure, and the formation and translocation of clay minerals. These processes are continually taking place, generally at the same time throughout the soil profile. Such processes have been going on for thousands of years.

The accumulation and incorporation of organic matter takes place with the decomposition of plant residue. Organic matter darkens the surface layer and helps to form the A horizon. In many places much of the surface layer has been eroded away or has been mixed with materials from underlying layers through cultivation. Once lost, organic matter normally takes a long time to replace. In Grayson County, the organic matter content of the surface layer ranges from low, as in Unicoi soils, to very high, as in Balsam soils.

For soils to form distinct subsoil horizons, soluble salts must be leached before the translocation of clay minerals can occur. Among the factors that affect this leaching are the kind of salts originally present and the permeability of the soil profile.

Well drained and moderately well drained soils in the survey area have a red to yellowish brown subsoil. These colors are caused mainly by thin coatings of iron oxides on the soil particles; although in some soils the color is inherited from the materials in which they formed. The structure of the subsoil is, in most soils in the survey area, weak or moderate subangular blocky.

The reduction and transfer of iron, called gleying, is associated mainly with the wetter, more poorly drained soils. Moderately well drained soils, such as Delanco, have yellowish brown to gray mottles, indicating the segregation of iron. In poorly drained soils, such as Hatboro and Kinkora, the subsoil and underlying material are grayish, indicating reduction and transfer of iron by removal in solution.

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Glossary

ABC soil. A soil having an A, a B, and a C horizon.

AC soil. A soil having only an A and a C horizon. Commonly, such soil formed in recent alluvium or on steep, rocky slopes.

Aeration, soil. The exchange of air in soil with air from the atmosphere. The air in a well aerated soil is similar to that in the atmosphere; the air in a poorly aerated soil is considerably higher in carbon dioxide and lower in oxygen.

Aggregate, soil. Many fine particles held in a single mass or cluster. Natural soil aggregates, such as granules, blocks, or prisms, are called peds. Clods are aggregates produced by tillage or logging.

Alkali (sodic) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Alluvial cone. A semiconical type of alluvial fan having very steep slopes. It is higher, narrower, and steeper than a fan and is composed of coarser and thicker layers of material deposited by a combination of alluvial episodes and (to a much lesser degree) landslides (debris flow). The coarsest materials tend to be concentrated at the apex of the cone.

Alluvial fan. A low, outspread mass of loose materials and/or rock material, commonly with gentle slopes. It is shaped like an open fan or a segment of a cone. The material was deposited by a stream at the place where it issues from a narrow mountain valley or upland valley or where a tributary stream is near or at its junction with the main stream. The fan is steepest near its apex, which points upstream, and slopes gently and convexly outward (downstream) with a gradual decrease in gradient.

Alluvium. Unconsolidated material, such as gravel, sand, silt, clay, and various mixtures of these, deposited on land by running water.

Alpha,alpha-dipyridyl. A compound that when dissolved in ammonium acetate is used to detect the presence of reduced iron (Fe II) in the soil. A positive reaction implies reducing conditions and the likely presence of redoximorphic features.

Animal unit month (AUM). The amount of forage required by one mature cow of approximately 1,000 pounds weight, with or without a calf, for 1 month.

Aquic conditions. Current soil wetness characterized by saturation, reduction, and redoximorphic features.

Argillic horizon. A subsoil horizon characterized by an accumulation of illuvial clay.

Available water capacity (available moisture capacity). The capacity of soils to hold water available for use by most plants. It is commonly defined as the difference between the amount of soil water at field moisture capacity and the amount at wilting point. It is commonly expressed as inches of water per inch of soil. The capacity, in inches, in a 60-inch profile or to a limiting layer is expressed as:

Very low	0 to 3
Low	3 to 6
Moderate	6 to 9
High	9 to 12
Very high	more than 12

Backslope. The position that forms the steepest and generally linear, middle portion of a hillslope. In profile, backslopes are commonly bounded by a convex shoulder above and a concave footslope below.

Backswamp. A flood-plain landform. Extensive, marshy or swampy, depressed areas of flood plains between natural levees and valley sides or terraces.

Basal area. The area of a cross section of a tree, generally referring to the section at breast height and measured outside the bark. It is a measure of stand density, commonly expressed in square feet.

Base saturation. The degree to which material having cation-exchange properties is saturated with exchangeable bases (sum of Ca, Mg, Na, and K), expressed as a percentage of the total cation-exchange capacity.

Base slope (geomorphology). A geomorphic component of hills consisting of the concave to linear (perpendicular to the contour) slope that, regardless of the lateral shape, forms an apron or wedge at the bottom of a hillside dominated by colluvium and slope-wash sediments (for example, slope alluvium).

Bedding plane. A planar or nearly planar bedding surface that visibly separates each successive layer of stratified sediment or rock (of the same or different lithology) from the preceding or following layer; a plane of deposition. It commonly marks a change in the circumstances of deposition and may show a parting, a color difference, a change in particle size, or various combinations of these. The term is commonly applied to any bedding surface, even one that is conspicuously bent or deformed by folding.

Bedding system. A drainage system made by plowing, grading, or otherwise shaping the surface of a flat field. It consists of a series of low ridges separated by shallow, parallel dead furrows.

Bedrock. The solid rock that underlies the soil and other unconsolidated material or that is exposed at the surface.

Bedrock-controlled topography. A landscape where the configuration and relief of the landforms are determined or strongly influenced by the underlying bedrock.

Bench terrace. A raised, level or nearly level strip of earth constructed on or nearly on a contour, supported by a barrier of rocks or similar material, and designed to make the soil suitable for tillage and to prevent accelerated erosion.

Bisequum. Two sequences of soil horizons, each of which consists of an illuvial horizon and the overlying eluvial horizons.

Blowout. A saucer-, cup-, or trough-shaped depression formed by wind erosion on a preexisting dune or other sand deposit, especially in an area of shifting sand or loose soil or where protective vegetation is disturbed or destroyed; the adjoining accumulation of sand derived from the depression, where recognizable, is commonly included. Blowouts are commonly small.

Bottom land. An informal term loosely applied to various portions of a flood plain.

Boulders. Rock fragments larger than 2 feet (60 centimeters) in diameter.

Breaks. A landscape or tract of steep, rough or broken land dissected by ravines and gullies and marking a sudden change in topography.

Breast height. An average height of 4.5 feet above the ground surface; the point on a tree where diameter measurements are ordinarily taken.

Brush management. Use of mechanical, chemical, or biological methods to make conditions favorable for reseeding or to reduce or eliminate competition from woody vegetation and thus allow understory grasses and forbs to recover. Brush management increases forage production and thus reduces the hazard of erosion. It can improve the habitat for some species of wildlife.

Cable yarding. A method of moving felled trees to a nearby central area for transport to a processing facility. Most cable yarding systems involve use of a drum, a pole, and wire cables in an arrangement similar to that of a rod and reel used for fishing.

To reduce friction and soil disturbance, felled trees generally are reeled in while one end is lifted or the entire log is suspended.

Calcareous soil. A soil containing enough calcium carbonate (commonly combined with magnesium carbonate) to effervesce visibly when treated with cold, dilute hydrochloric acid.

California bearing ratio (CBR). The load-supporting capacity of a soil as compared to that of standard crushed limestone, expressed as a ratio. First standardized in California. A soil having a CBR of 16 supports 16 percent of the load that would be supported by standard crushed limestone, per unit area, with the same degree of distortion.

Canopy. The leafy crown of trees or shrubs. (See Crown.)

Capillary water. Water held as a film around soil particles and in tiny spaces between particles. Surface tension is the adhesive force that holds capillary water in the soil.

Catena. A sequence, or "chain," of soils on a landscape that formed in similar kinds of parent material and under similar climatic conditions but that have different characteristics as a result of differences in relief and drainage.

Cation. An ion carrying a positive charge of electricity. The common soil cations are calcium, potassium, magnesium, sodium, and hydrogen.

Cation-exchange capacity. The total amount of exchangeable cations that can be held by the soil, expressed in terms of milliequivalents per 100 grams of soil at neutrality (pH 7.0) or at some other stated pH value. The term, as applied to soils, is synonymous with base-exchange capacity but is more precise in meaning.

Catsteps. See Terracettes.

Cement rock. Shaly limestone used in the manufacture of cement.

Channery soil material. Soil material that has, by volume, 15 to 35 percent thin, flat fragments of sandstone, shale, slate, limestone, or schist as much as 6 inches (15 centimeters) along the longest axis. A single piece is called a channer.

Chemical treatment. Control of unwanted vegetation through the use of chemicals.

Chiseling. Tillage with an implement having one or more soil-penetrating points that shatter or loosen hard, compacted layers to a depth below normal plow depth.

Clay. As a soil separate, the mineral soil particles less than 0.002 millimeter in diameter. As a soil textural class, soil material that is 40 percent or more clay, less than 45 percent sand, and less than 40 percent silt.

Clay depletions. See Redoximorphic features.

Clay film. A thin coating of oriented clay on the surface of a soil aggregate or lining pores or root channels. Synonyms: clay coating, clay skin.

Claypan. A dense, compact, slowly permeable subsoil layer that contains much more clay than the overlying materials, from which it is separated by a sharply defined boundary. A claypan is commonly hard when dry and plastic and sticky when wet.

Climax plant community. The stabilized plant community on a particular site. The plant cover reproduces itself and does not change so long as the environment remains the same.

Concretions. See Redoximorphic features.

Coarse textured soil. Sand or loamy sand.

Cobble (or cobblestone). A rounded or partly rounded fragment of rock 3 to 10 inches (7.6 to 25 centimeters) in diameter.

Cobbly soil material. Material that has 15 to 35 percent, by volume, rounded or partially rounded rock fragments 3 to 10 inches (7.6 to 25 centimeters) in diameter. Very cobbly soil material has 35 to 60 percent of these rock fragments, and extremely cobbly soil material has more than 60 percent.

COLE (coefficient of linear extensibility). See Linear extensibility.

Colluvium. Unconsolidated, unsorted earth material being transported or deposited

on side slopes and/or at the base of slopes by mass movement (e.g., direct gravitational action) and by local, unconcentrated runoff.

Complex slope. Irregular or variable slope. Planning or establishing terraces, diversions, and other water-control structures on a complex slope is difficult.

Complex, soil. A map unit of two or more kinds of soil or miscellaneous areas in such an intricate pattern or so small in area that it is not practical to map them separately at the selected scale of mapping. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas.

Concretions. Cemented bodies with crude internal symmetry organized around a point, a line, or a plane. They typically take the form of concentric layers visible to the naked eye. Calcium carbonate, iron oxide, and manganese oxide are common compounds making up concretions. If formed in place, concretions of iron oxide or manganese oxide are generally considered a type of redoximorphic concentration.

Conglomerate. A coarse-grained, clastic sedimentary rock composed of rounded or subangular rock fragments more than 2 millimeters in diameter. It commonly has a matrix of sand and finer textured material. Conglomerate is the consolidated equivalent of gravel.

Conservation cropping system. Growing crops in combination with needed cultural and management practices. In a good conservation cropping system, the soil-improving crops and practices more than offset the effects of the soil-depleting crops and practices. Cropping systems are needed on all tilled soils. Soil-improving practices in a conservation cropping system include the use of rotations that contain grasses and legumes and the return of crop residue to the soil. Other practices include the use of green manure crops of grasses and legumes, proper tillage, adequate fertilization, and weed and pest control.

Conservation tillage. A tillage system that does not invert the soil and that leaves a protective amount of crop residue on the surface throughout the year.

Consistence, soil. Refers to the degree of cohesion and adhesion of soil material and its resistance to deformation when ruptured. Consistence includes resistance of soil material to rupture and to penetration; plasticity, toughness, and stickiness of puddled soil material; and the manner in which the soil material behaves when subject to compression. Terms describing consistence are defined in the “Soil Survey Manual.”

Contour stripcropping. Growing crops in strips that follow the contour. Strips of grass or close-growing crops are alternated with strips of clean-tilled crops or summer fallow.

Control section. The part of the soil on which classification is based. The thickness varies among different kinds of soil, but for many it is that part of the soil profile between depths of 10 inches and 40 or 80 inches.

Coprogenous earth (sedimentary peat). A type of limnic layer composed predominantly of fecal material derived from aquatic animals.

Corrosion (geomorphology). A process of erosion whereby rocks and soil are removed or worn away by natural chemical processes, especially by the solvent action of running water, but also by other reactions, such as hydrolysis, hydration, carbonation, and oxidation.

Corrosion (soil survey interpretations). Soil-induced electrochemical or chemical action that dissolves or weakens concrete or uncoated steel.

Cover crop. A close-growing crop grown primarily to improve and protect the soil between periods of regular crop production, or a crop grown between trees and vines in orchards and vineyards.

Creep deposits. Soil material which has moved downslope short distances from forces of gravity.

Crop residue management. Returning crop residue to the soil, which helps to

maintain soil structure, organic matter content, and fertility and helps to control erosion.

Cropping system. Growing crops according to a planned system of rotation and management practices.

Cross-slope farming. Deliberately conducting farming operations on sloping farmland in such a way that tillage is across the general slope.

Crown. The upper part of a tree or shrub, including the living branches and their foliage.

Cryoturbate. A mass of soil or other unconsolidated earthy material moved or disturbed by frost action. It is typically coarser than the underlying material.

Cuesta. An asymmetric ridge capped by resistant rock layers of slight or moderate dip (commonly less than 15 percent slopes); a type of homocline produced by differential erosion of interbedded resistant and weak rocks. A cuesta has a long, gentle slope on one side (dip slope) that roughly parallels the inclined beds; on the other side, it has a relatively short and steep or clifflike slope (scarp) that cuts through the tilted rocks.

Culmination of the mean annual increment (CMAI). The average annual increase per acre in the volume of a stand. Computed by dividing the total volume of the stand by its age. As the stand increases in age, the mean annual increment continues to increase until mortality begins to reduce the rate of increase. The point where the stand reaches its maximum annual rate of growth is called the culmination of the mean annual increment.

Cutbanks cave (in tables). The walls of excavations tend to cave in or slough.

Deferred grazing. Postponing grazing or resting grazing land for a prescribed period.

Delta. A body of alluvium having a surface that is fan shaped and nearly flat; deposited at or near the mouth of a river or stream where it enters a body of relatively quiet water, generally a sea or lake.

Dense layer (in tables). A very firm, massive layer that has a bulk density of more than 1.8 grams per cubic centimeter. Such a layer affects the ease of digging and can affect filling and compacting.

Depth, soil. Generally, the thickness of the soil over bedrock. Very deep soils are more than 60 inches deep over bedrock; deep soils, 40 to 60 inches; moderately deep soils, 20 to 40 inches; shallow soils, 10 to 20 inches; and very shallow soils, less than 10 inches.

Diatomaceous earth. A geologic deposit of fine, grayish siliceous material composed chiefly or entirely of the remains of diatoms.

Dip slope. A slope of the land surface, roughly determined by and approximately conforming to the dip of the underlying bedrock.

Diversion (or diversion terrace). A ridge of earth, generally a terrace, built to protect downslope areas by diverting runoff from its natural course.

Divided-slope farming. A form of field stripcropping in which crops are grown in a systematic arrangement of two strips, or bands, across the slope to reduce the hazard of water erosion. One strip is in a close-growing crop that provides protection from erosion, and the other strip is in a crop that provides less protection from erosion. This practice is used where slopes are not long enough to permit a full stripcropping pattern to be used.

Drainage class (natural). Refers to the frequency and duration of wet periods under conditions similar to those under which the soil formed. Alterations of the water regime by human activities, either through drainage or irrigation, are not a consideration unless they have significantly changed the morphology of the soil. Seven classes of natural soil drainage are recognized—*excessively drained, somewhat excessively drained, well drained, moderately well drained, somewhat poorly drained, poorly drained,* and *very poorly drained*. These classes are defined in the “Soil Survey Manual.”

Drainage, surface. Runoff, or surface flow of water, from an area.

Drainageway. A general term for a course or channel along which water moves in draining an area. A term restricted to relatively small, linear depressions that at some time move concentrated water and either do not have a defined channel or have only a small defined channel.

Draw. A small stream valley that generally is shallower and more open than a ravine or gulch and that has a broader bottom. The present stream channel may appear inadequate to have cut the drainageway that it occupies.

Drift. A general term applied to all mineral material (clay, silt, sand, gravel, and boulders) transported by a glacier and deposited directly by or from the ice or transported by running water emanating from a glacier. Drift includes unstratified material (till) that forms moraines and stratified deposits that form outwash plains, eskers, kames, varves, and glaciofluvial sediments. The term is generally applied to Pleistocene glacial deposits in areas that no longer contain glaciers.

Duff. A generally firm organic layer on the surface of mineral soils. It consists of fallen plant material that is in the process of decomposition and includes everything from the litter on the surface to underlying pure humus.

Dune. A low mound, ridge, bank, or hill of loose, windblown granular material (generally sand), either barren and capable of movement from place to place or covered and stabilized with vegetation but retaining its characteristic shape.

Earthy fill. See Mine spoil.

Ecological site. An area where climate, soil, and relief are sufficiently uniform to produce a distinct natural plant community. An ecological site is the product of all the environmental factors responsible for its development. It is typified by an association of species that differ from those on other ecological sites in kind and/or proportion of species or in total production.

Eluviation. The movement of material in true solution or colloidal suspension from one place to another within the soil. Soil horizons that have lost material through eluviation are eluvial; those that have received material are illuvial.

Endosaturation. A type of saturation of the soil in which all horizons between the upper boundary of saturation and a depth of 2 meters are saturated.

Ephemeral stream. A stream, or reach of a stream, that flows only in direct response to precipitation. It receives no long-continued supply from melting snow or other source, and its channel is above the water table at all times.

Episaturation. A type of saturation indicating a perched water table in a soil in which saturated layers are underlain by one or more unsaturated layers within 2 meters of the surface.

Erosion. The wearing away of the land surface by water, wind, ice, or other geologic agents and by such processes as gravitational creep.

Erosion (geologic). Erosion caused by geologic processes acting over long geologic periods and resulting in the wearing away of mountains and the building up of such landscape features as flood plains and coastal plains. Synonym: natural erosion.

Erosion (accelerated). Erosion much more rapid than geologic erosion, mainly as a result of human or animal activities or of a catastrophe in nature, such as a fire, that exposes the surface.

Erosion pavement. A surficial lag concentration or layer of gravel and other rock fragments that remains on the soil surface after sheet or rill erosion or wind has removed the finer soil particles and that tends to protect the underlying soil from further erosion.

Erosion surface. A land surface shaped by the action of erosion, especially by running water.

Escarpment. A relatively continuous and steep slope or cliff breaking the general continuity of more gently sloping land surfaces and resulting from erosion or

faulting. Most commonly applied to cliffs produced by differential erosion. Synonym: scarp.

Fallow. Cropland left idle in order to restore productivity through accumulation of moisture. Summer fallow is common in regions of limited rainfall where cereal grain is grown. The soil is tilled for at least one growing season for weed control and decomposition of plant residue.

Fan remnant. A general term for landforms that are the remaining parts of older fan landforms, such as alluvial fans, that have been either dissected or partially buried.

Fertility, soil. The quality that enables a soil to provide plant nutrients, in adequate amounts and in proper balance, for the growth of specified plants when light, moisture, temperature, tilth, and other growth factors are favorable.

Fibric soil material (peat). The least decomposed of all organic soil material. Peat contains a large amount of well preserved fiber that is readily identifiable according to botanical origin. Peat has the lowest bulk density and the highest water content at saturation of all organic soil material.

Field moisture capacity. The moisture content of a soil, expressed as a percentage of the ovendry weight, after the gravitational, or free, water has drained away; the field moisture content 2 or 3 days after a soaking rain; also called *normal field capacity, normal moisture capacity,* or *capillary capacity*.

Fill slope. A sloping surface consisting of excavated soil material from a road cut. It commonly is on the downhill side of the road.

Fine textured soil. Sandy clay, silty clay, or clay.

Firebreak. An area cleared of flammable material to stop or help control creeping or running fires. It also serves as a line from which to work and to facilitate the movement of firefighters and equipment. Designated roads also serve as firebreaks.

First bottom. An obsolete, informal term loosely applied to the lowest flood-plain steps that are subject to regular flooding.

Flaggy soil material. Material that has, by volume, 15 to 35 percent flagstones. Very flaggy soil material has 35 to 60 percent flagstones, and extremely flaggy soil material has more than 60 percent flagstones.

Flagstone. A thin fragment of sandstone, limestone, slate, shale, or (rarely) schist 6 to 15 inches (15 to 38 centimeters) long.

Flood plain. The nearly level plain that borders a stream and is subject to flooding unless protected artificially.

Flood-plain landforms. A variety of constructional and erosional features produced by stream channel migration and flooding. Examples include backswamps, flood-plain splays, meanders, meander belts, meander scrolls, oxbow lakes, and natural levees.

Flood-plain splay. A fan-shaped deposit or other outspread deposit formed where an overloaded stream breaks through a levee (natural or artificial) and deposits its material (commonly coarse grained) on the flood plain.

Flood-plain step. An essentially flat, terrace-like alluvial surface within a valley that is frequently covered by floodwater from the present stream; any approximately horizontal surface still actively modified by fluvial scour and/or deposition. May occur individually or as a series of steps.

Fluvial. Of or pertaining to rivers or streams; produced by stream or river action.

Foothills. A region of steeply sloping hills that fringes a mountain range or high-plateau escarpment. The hills have relief of as much as 1,000 feet (300 meters).

Footslope. The concave surface at the base of a hillslope. A footslope is a transition zone between upslope sites of erosion and transport (shoulders and backslopes) and downslope sites of deposition (toeslopes).

Forb. Any herbaceous plant not a grass or a sedge.

Forest cover. All trees and other woody plants (underbrush) covering the ground in a forest.

Forest type. A stand of trees similar in composition and development because of given physical and biological factors by which it may be differentiated from other stands.

Fragipan. A loamy, brittle subsurface horizon low in porosity and content of organic matter and low or moderate in clay but high in silt or very fine sand. A fragipan appears cemented and restricts roots. When dry, it is hard or very hard and has a higher bulk density than the horizon or horizons above. When moist, it tends to rupture suddenly under pressure rather than to deform slowly.

Genesis, soil. The mode of origin of the soil. Refers especially to the processes or soil-forming factors responsible for the formation of the solum, or true soil, from the unconsolidated parent material.

Gilgai. Commonly, a succession of microbasins and microknolls in nearly level areas or of microvalleys and microridges parallel with the slope. Typically, the microrelief of clayey soils that shrink and swell considerably with changes in moisture content.

Gleyed soil. Soil that formed under poor drainage, resulting in the reduction of iron and other elements in the profile and in gray colors.

Graded stripcropping. Growing crops in strips that grade toward a protected waterway.

Grassed waterway. A natural or constructed waterway, typically broad and shallow, seeded to grass as protection against erosion. Conducts surface water away from cropland.

Gravel. Rounded or angular fragments of rock as much as 3 inches (2 millimeters to 7.6 centimeters) in diameter. An individual piece is a pebble.

Gravelly soil material. Material that has 15 to 35 percent, by volume, rounded or angular rock fragments, not prominently flattened, as much as 3 inches (7.6 centimeters) in diameter.

Green manure crop (agronomy). A soil-improving crop grown to be plowed under in an early stage of maturity or soon after maturity.

Ground water. Water filling all the unblocked pores of the material below the water table.

Gully. A small channel with steep sides caused by erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. The distinction between a gully and a rill is one of depth. A gully generally is an obstacle to farm machinery and is too deep to be obliterated by ordinary tillage; a rill is of lesser depth and can be smoothed over by ordinary tillage.

Hard bedrock. Bedrock that cannot be excavated except by blasting or by the use of special equipment that is not commonly used in construction.

Hard to reclaim (in tables). Reclamation is difficult after the removal of soil for construction and other uses. Revegetation and erosion control are extremely difficult.

Hardpan. A hardened or cemented soil horizon, or layer. The soil material is sandy, loamy, or clayey and is cemented by iron oxide, silica, calcium carbonate, or other substance.

Head slope (geomorphology). A geomorphic component of hills consisting of a laterally concave area of a hillside, especially at the head of a drainageway. The overland waterflow is converging.

Hemic soil material (mucky peat). Organic soil material intermediate in degree of decomposition between the less decomposed fibric material and the more decomposed sapric material.

High-residue crops. Such crops as small grain and corn used for grain. If properly managed, residue from these crops can be used to control erosion until the next

crop in the rotation is established. These crops return large amounts of organic matter to the soil.

Hill. A generic term for an elevated area of the land surface, rising as much as 1,000 feet above surrounding lowlands, commonly of limited summit area and having a well defined outline. Slopes are generally more than 15 percent. The distinction between a hill and a mountain is arbitrary and may depend on local usage.

Hillslope. A generic term for the steeper part of a hill between its summit and the drainage line, valley flat, or depression floor at the base of a hill.

Horizon, soil. A layer of soil, approximately parallel to the surface, having distinct characteristics produced by soil-forming processes. In the identification of soil horizons, an uppercase letter represents the major horizons. Numbers or lowercase letters that follow represent subdivisions of the major horizons. An explanation of the subdivisions is given in the "Soil Survey Manual." The major horizons of mineral soil are as follows:

O horizon.—An organic layer of fresh and decaying plant residue.

L horizon.—A layer of organic and mineral limnic materials, including coprogenous earth (sedimentary peat), diatomaceous earth, and marl.

A horizon.—The mineral horizon at or near the surface in which an accumulation of humified organic matter is mixed with the mineral material. Also, a plowed surface horizon, most of which was originally part of a B horizon.

E horizon.—The mineral horizon in which the main feature is loss of silicate clay, iron, aluminum, or some combination of these.

B horizon.—The mineral horizon below an A horizon. The B horizon is in part a layer of transition from the overlying A to the underlying C horizon. The B horizon also has distinctive characteristics, such as (1) accumulation of clay, sesquioxides, humus, or a combination of these; (2) prismatic or blocky structure; (3) redder or browner colors than those in the A horizon; or (4) a combination of these.

C horizon.—The mineral horizon or layer, excluding indurated bedrock, that is little affected by soil-forming processes and does not have the properties typical of the overlying soil material. The material of a C horizon may be either like or unlike that in which the solum formed. If the material is known to differ from that in the solum, an Arabic numeral, commonly a 2, precedes the letter C.

Cr horizon.—Soft, consolidated bedrock beneath the soil.

R layer.—Consolidated bedrock beneath the soil. The bedrock commonly underlies a C horizon, but it can be directly below an A or a B horizon.

Humus. The well decomposed, more or less stable part of the organic matter in mineral soils.

Hydrologic soil groups. Refers to soils grouped according to their runoff potential. The soil properties that influence this potential are those that affect the minimum rate of water infiltration on a bare soil during periods after prolonged wetting when the soil is not frozen. These properties are depth to a seasonal high water table, the infiltration rate and permeability after prolonged wetting, and depth to a very slowly permeable layer. The slope and the kind of plant cover are not considered but are separate factors in predicting runoff.

Igneous rock. Rock that was formed by cooling and solidification of magma and that has not been changed appreciably by weathering since its formation. Major varieties include plutonic and volcanic rock (e.g., andesite, basalt, and granite).

Illuviation. The movement of soil material from one horizon to another in the soil profile. Generally, material is removed from an upper horizon and deposited in a lower horizon.

Impervious soil. A soil through which water, air, or roots penetrate slowly or not at all. No soil is absolutely impervious to air and water all the time.

Infiltration. The downward entry of water into the immediate surface of soil or other

material, as contrasted with percolation, which is movement of water through soil layers or material.

Infiltration capacity. The maximum rate at which water can infiltrate into a soil under a given set of conditions.

Infiltration rate. The rate at which water penetrates the surface of the soil at any given instant, usually expressed in inches per hour. The rate can be limited by the infiltration capacity of the soil or the rate at which water is applied at the surface.

Intake rate. The average rate of water entering the soil under irrigation. Most soils have a fast initial rate; the rate decreases with application time. Therefore, intake rate for design purposes is not a constant but is a variable depending on the net irrigation application. The rate of water intake, in inches per hour, is expressed as follows:

Less than 0.2	very low
0.2 to 0.4	low
0.4 to 0.75	moderately low
0.75 to 1.25	moderate
1.25 to 1.75	moderately high
1.75 to 2.5	high
More than 2.5	very high

Interfluve. A landform composed of the relatively undissected upland or ridge between two adjacent valleys containing streams flowing in the same general direction. An elevated area between two drainageways that sheds water to those drainageways.

Interfluve (geomorphology). A geomorphic component of hills consisting of the uppermost, comparatively level or gently sloping area of a hill; shoulders of backwearing hillslopes can narrow the upland or can merge, resulting in a strongly convex shape.

Intermittent stream. A stream, or reach of a stream, that does not flow year-round but that is commonly dry for 3 or more months out of 12 and whose channel is generally below the local water table. It flows only during wet periods or when it receives ground-water discharge or long, continued contributions from melting snow or other surface and shallow subsurface sources.

Iron depletions. See Redoximorphic features.

Irrigation. Application of water to soils to assist in production of crops. Methods of irrigation are:

Basin.—Water is applied rapidly to nearly level plains surrounded by levees or dikes.

Border.—Water is applied at the upper end of a strip in which the lateral flow of water is controlled by small earth ridges called border dikes, or borders.

Controlled flooding.—Water is released at intervals from closely spaced field ditches and distributed uniformly over the field.

Corrugation.—Water is applied to small, closely spaced furrows or ditches in fields of close-growing crops or in orchards so that it flows in only one direction.

Drip (or trickle).—Water is applied slowly and under low pressure to the surface of the soil or into the soil through such applicators as emitters, porous tubing, or perforated pipe.

Furrow.—Water is applied in small ditches made by cultivation implements. Furrows are used for tree and row crops.

Sprinkler.—Water is sprayed over the soil surface through pipes or nozzles from a pressure system.

Subirrigation.—Water is applied in open ditches or tile lines until the water table is raised enough to wet the soil.

Wild flooding.—Water, released at high points, is allowed to flow onto an area without controlled distribution.

Karst (topography). A kind of topography that formed in limestone, gypsum, or other soluble rocks by dissolution and that is characterized by closed depressions, sinkholes, caves, and underground drainage.

Knoll. A small, low, rounded hill rising above adjacent landforms.

K_{sat}. Saturated hydraulic conductivity. (See Permeability.)

Lacustrine deposit. Material deposited in lake water and exposed when the water level is lowered or the elevation of the land is raised.

Lake plain. A nearly level surface marking the floor of an extinct lake filled by well sorted, generally fine textured, stratified deposits, commonly containing varves.

Lake terrace. A narrow shelf, partly cut and partly built, produced along a lakeshore in front of a scarp line of low cliffs and later exposed when the water level falls.

Landslide. A general, encompassing term for most types of mass movement landforms and processes involving the downslope transport and outward deposition of soil and rock materials caused by gravitational forces; the movement may or may not involve saturated materials. The speed and distance of movement, as well as the amount of soil and rock material, vary greatly.

Large stones (in tables). Rock fragments 3 inches (7.6 centimeters) or more across. Large stones adversely affect the specified use of the soil.

Leaching. The removal of soluble material from soil or other material by percolating water.

Linear extensibility. Refers to the change in length of an unconfined clod as moisture content is decreased from a moist to a dry state. Linear extensibility is used to determine the shrink-swell potential of soils. It is an expression of the volume change between the water content of the clod at $^1/_3$- or $^1/_{10}$-bar tension (33kPa or 10kPa tension) and oven dryness. Volume change is influenced by the amount and type of clay minerals in the soil. The volume change is the percent change for the whole soil. If it is expressed as a fraction, the resulting value is COLE, coefficient of linear extensibility.

Liquid limit. The moisture content at which the soil passes from a plastic to a liquid state.

Loam. Soil material that is 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

Loess. Material transported and deposited by wind and consisting dominantly of silt-sized particles.

Low strength. The soil is not strong enough to support loads.

Low-residue crops. Such crops as corn used for silage, peas, beans, and potatoes. Residue from these crops is not adequate to control erosion until the next crop in the rotation is established. These crops return little organic matter to the soil.

Marl. An earthy, unconsolidated deposit consisting chiefly of calcium carbonate mixed with clay in approximately equal proportions; formed primarily under freshwater lacustrine conditions but also formed in more saline environments.

Mass movement. A generic term for the dislodgment and downslope transport of soil and rock material as a unit under direct gravitational stress.

Masses. See Redoximorphic features.

Meander belt. The zone within which migration of a meandering channel occurs; the flood-plain area included between two imaginary lines drawn tangential to the outer bends of active channel loops.

Meander scar. A crescent-shaped, concave or linear mark on the face of a bluff or valley wall, produced by the lateral erosion of a meandering stream that impinged upon and undercut the bluff.

Meander scroll. One of a series of long, parallel, close-fitting, crescent-shaped ridges

and troughs formed along the inner bank of a stream meander as the channel migrated laterally down-valley and toward the outer bank.

Mechanical treatment. Use of mechanical equipment for seeding, brush management, and other management practices.

Medium textured soil. Very fine sandy loam, loam, silt loam, or silt.

Mesa. A broad, nearly flat-topped and commonly isolated landmass bounded by steep slopes or precipitous cliffs and capped by layers of resistant, nearly horizontal rocky material. The summit width is characteristically greater than the height of the bounding escarpments.

Metamorphic rock. Rock of any origin altered in mineralogical composition, chemical composition, or structure by heat, pressure, and movement at depth in the earth's crust. Nearly all such rocks are crystalline.

Mine spoil. An accumulation of displaced earthy material, rock, or other waste material removed during mining or excavation. Also called earthy fill.

Mineral soil. Soil that is mainly mineral material and low in organic material. Its bulk density is more than that of organic soil.

Minimum tillage. Only the tillage essential to crop production and prevention of soil damage.

Miscellaneous area. A kind of map unit that has little or no natural soil and supports little or no vegetation.

Moderately coarse textured soil. Coarse sandy loam, sandy loam, or fine sandy loam.

Moderately fine textured soil. Clay loam, sandy clay loam, or silty clay loam.

Mollic epipedon. A thick, dark, humus-rich surface horizon (or horizons) that has high base saturation and pedogenic soil structure. It may include the upper part of the subsoil.

Morphology, soil. The physical makeup of the soil, including the texture, structure, porosity, consistence, color, and other physical, mineral, and biological properties of the various horizons, and the thickness and arrangement of those horizons in the soil profile.

Mottling, soil. Irregular spots of different colors that vary in number and size. Descriptive terms are as follows: abundance—*few, common,* and *many;* size—*fine, medium,* and *coarse;* and contrast—*faint, distinct,* and *prominent*. The size measurements are of the diameter along the greatest dimension. *Fine* indicates less than 5 millimeters (about 0.2 inch); *medium,* from 5 to 15 millimeters (about 0.2 to 0.6 inch); and *coarse,* more than 15 millimeters (about 0.6 inch).

Mountain. A generic term for an elevated area of the land surface, rising more than 1,000 feet (300 meters) above surrounding lowlands, commonly of restricted summit area (relative to a plateau) and generally having steep sides. A mountain can occur as a single, isolated mass or in a group forming a chain or range. Mountains are formed primarily by tectonic activity and/or volcanic action but can also be formed by differential erosion. Mountains are defined as low or high:
Low mountains.—Mountains that have elevations above sea level of less than 4,400 feet on southern aspects and less than 4,000 feet on northern aspects.
High mountains.—Mountains that have elevations above sea level of more than 4,400 feet on southern aspects and more than 4,000 feet on northern aspects.

Muck. Dark, finely divided, well decomposed organic soil material. (See Sapric soil material.)

Mudstone. A blocky or massive, fine-grained sedimentary rock in which the proportions of clay and silt are approximately equal. Also, a general term for such material as clay, silt, claystone, siltstone, shale, and argillite and that should be used only when the amounts of clay and silt are not known or cannot be precisely identified.

Munsell notation. A designation of color by degrees of three simple variables—hue,

value, and chroma. For example, a notation of 10YR 6/4 is a color with hue of 10YR, value of 6, and chroma of 4.

Natric horizon. A special kind of argillic horizon that contains enough exchangeable sodium to have an adverse effect on the physical condition of the subsoil.

Neutral soil. A soil having a pH value of 6.6 to 7.3. (See Reaction, soil.)

Nodules. See Redoximorphic features.

Nose slope (geomorphology). A geomorphic component of hills consisting of the projecting end (laterally convex area) of a hillside. The overland waterflow is predominantly divergent. Nose slopes consist dominantly of colluvium and slope-wash sediments (for example, slope alluvium).

Nutrient, plant. Any element taken in by a plant essential to its growth. Plant nutrients are mainly nitrogen, phosphorus, potassium, calcium, magnesium, sulfur, iron, manganese, copper, boron, and zinc obtained from the soil and carbon, hydrogen, and oxygen obtained from the air and water.

Organic matter. Plant and animal residue in the soil in various stages of decomposition. The content of organic matter in the surface layer is described as follows:

Very low	less than 0.5 percent
Low	0.5 to 1.0 percent
Moderately low	1.0 to 2.0 percent
Moderate	2.0 to 4.0 percent
High	4.0 to 8.0 percent
Very high	more than 8.0 percent

Paleoterrace. An erosional remnant of a terrace that retains the surface form and alluvial deposits of its origin but was not emplaced by, and commonly does not grade to, a present-day stream or drainage network.

Pan. A compact, dense layer in a soil that impedes the movement of water and the growth of roots. For example, *hardpan, fragipan, claypan, plowpan,* and *traffic pan*.

Parent material. The unconsolidated organic and mineral material in which soil forms.

Peat. Unconsolidated material, largely undecomposed organic matter, that has accumulated under excess moisture. (See Fibric soil material.)

Ped. An individual natural soil aggregate, such as a granule, a prism, or a block.

Pedisediment. A layer of sediment, eroded from the shoulder and backslope of an erosional slope, that lies on and is being (or was) transported across a gently sloping erosional surface at the foot of a receding hill or mountain slope.

Pedon. The smallest volume that can be called "a soil." A pedon is three dimensional and large enough to permit study of all horizons. Its area ranges from about 10 to 100 square feet (1 square meter to 10 square meters), depending on the variability of the soil.

Percolation. The movement of water through the soil.

Permafrost. Ground, soil, or rock that remains at or below 0 degrees C for at least 2 years. It is defined on the basis of temperature and is not necessarily frozen.

Permeability. The quality of the soil that enables water or air to move downward through the profile. The rate at which a saturated soil transmits water is accepted as a measure of this quality. In soil physics, the rate is referred to as "saturated hydraulic conductivity," which is defined in the "Soil Survey Manual." In line with conventional usage in the engineering profession and with traditional usage in published soil surveys, this rate of flow continues to be expressed as "permeability." Terms describing permeability, measured in inches per hour, are as follows:

Impermeable	less than 0.0015 inch
Very slow	0.0015 to 0.06 inch
Slow	0.06 to 0.2 inch

Moderately slow	0.2 to 0.6 inch
Moderate	0.6 inch to 2.0 inches
Moderately rapid	2.0 to 6.0 inches
Rapid	6.0 to 20 inches
Very rapid	more than 20 inches

pH value. A numerical designation of acidity and alkalinity in soil. (See Reaction, soil.)

Phase, soil. A subdivision of a soil series based on features that affect its use and management, such as slope, stoniness, and flooding.

Piping (in tables). Formation of subsurface tunnels or pipelike cavities by water moving through the soil.

Pitting (in tables). Pits caused by melting around ice. They form on the soil after plant cover is removed.

Plastic limit. The moisture content at which a soil changes from semisolid to plastic.

Plasticity index. The numerical difference between the liquid limit and the plastic limit; the range of moisture content within which the soil remains plastic.

Plateau (geomorphology). A comparatively flat area of great extent and elevation; specifically, an extensive land region that is considerably elevated (more than 100 meters) above the adjacent lower-lying terrain, is commonly limited on at least one side by an abrupt descent, and has a flat or nearly level surface. A comparatively large part of a plateau surface is near summit level.

Playa. The generally dry and nearly level lake plain that occupies the lowest parts of closed depressions, such as those on intermontane basin floors. Temporary flooding occurs primarily in response to precipitation and runoff. Playa deposits are fine grained and may or may not have a high water table and saline conditions.

Plinthite. The sesquioxide-rich, humus-poor, highly weathered mixture of clay with quartz and other diluents. It commonly appears as red mottles, usually in platy, polygonal, or reticulate patterns. Plinthite changes irreversibly to an ironstone hardpan or to irregular aggregates on repeated wetting and drying, especially if it is exposed also to heat from the sun. In a moist soil, plinthite can be cut with a spade. It is a form of laterite.

Plowpan. A compacted layer formed in the soil directly below the plowed layer.

Ponding. Standing water on soils in closed depressions. Unless the soils are artificially drained, the water can be removed only by percolation or evapotranspiration.

Poorly graded. Refers to a coarse-grained soil or soil material consisting mainly of particles of nearly the same size. Because there is little difference in size of the particles, density can be increased only slightly by compaction.

Pore linings. See Redoximorphic features.

Potential native plant community. See Climax plant community.

Potential rooting depth (effective rooting depth). Depth to which roots could penetrate if the content of moisture in the soil were adequate. The soil has no properties restricting the penetration of roots to this depth.

Prescribed burning. Deliberately burning an area for specific management purposes, under the appropriate conditions of weather and soil moisture and at the proper time of day.

Productivity, soil. The capability of a soil for producing a specified plant or sequence of plants under specific management.

Profile, soil. A vertical section of the soil extending through all its horizons and into the parent material.

Proper grazing use. Grazing at an intensity that maintains enough cover to protect the soil and maintain or improve the quantity and quality of the desirable vegetation. This practice increases the vigor and reproduction capacity of the key plants and promotes the accumulation of litter and mulch necessary to conserve soil and water.

Reaction, soil. A measure of acidity or alkalinity of a soil, expressed as pH values. A soil that tests to pH 7.0 is described as precisely neutral in reaction because it is neither acid nor alkaline. The degrees of acidity or alkalinity, expressed as pH values, are:

Ultra acid	less than 3.5
Extremely acid	3.5 to 4.4
Very strongly acid	4.5 to 5.0
Strongly acid	5.1 to 5.5
Moderately acid	5.6 to 6.0
Slightly acid	6.1 to 6.5
Neutral	6.6 to 7.3
Slightly alkaline	7.4 to 7.8
Moderately alkaline	7.9 to 8.4
Strongly alkaline	8.5 to 9.0
Very strongly alkaline	9.1 and higher

Red beds. Sedimentary strata that are mainly red and are made up largely of sandstone and shale.

Redoximorphic concentrations. See Redoximorphic features.

Redoximorphic depletions. See Redoximorphic features.

Redoximorphic features. Redoximorphic features are associated with wetness and result from alternating periods of reduction and oxidation of iron and manganese compounds in the soil. Reduction occurs during saturation with water, and oxidation occurs when the soil is not saturated. Characteristic color patterns are created by these processes. The reduced iron and manganese ions may be removed from a soil if vertical or lateral fluxes of water occur, in which case there is no iron or manganese precipitation in that soil. Wherever the iron and manganese are oxidized and precipitated, they form either soft masses or hard concretions or nodules. Movement of iron and manganese as a result of redoximorphic processes in a soil may result in redoximorphic features. The redoximorphic features are defined as follows:

1. *Redoximorphic concentrations.*—These are zones of apparent accumulation of iron-manganese oxides and include nodules and concretions, masses, and pore linings. *Nodules and concretions* are cemented bodies that can be removed from the soil intact. Concretions are distinguished from nodules on the basis of internal organization. A concretion typically has concentric layers that are visible to the naked eye. Nodules do not have visible organized internal structure. *Masses* are noncemented concentrations of substances within the soil matrix. *Pore linings* are zones of accumulation along pores that may be either coatings on pore surfaces or impregnations from the matrix adjacent to the pores.

2. *Redoximorphic depletions.*—These are zones of low chroma (chromas less than those in the matrix) where either iron-manganese oxides alone or both iron-manganese oxides and clay have been stripped out. They include iron depletions and clay depletions. *Iron depletions* are zones that contain low amounts of iron and manganese oxides but have a clay content similar to that of the adjacent matrix. *Clay depletions* are zones that contain low amounts of iron, manganese, and clay (often referred to as silt coatings or skeletans).

3. *Reduced matrix.*—This is a soil matrix that has low chroma in situ but undergoes a change in hue or chroma within 30 minutes after the soil material has been exposed to air.

Reduced matrix. See Redoximorphic features.

Regolith. All unconsolidated earth materials above the solid bedrock. It includes material weathered in place from all kinds of bedrock and alluvial, glacial, eolian, lacustrine, and pyroclastic deposits.

Relief. The relative difference in elevation between the upland summits and the lowlands or valleys of a given region.
Residuum (residual soil material). Unconsolidated, weathered or partly weathered mineral material that accumulated as bedrock disintegrated in place.
Ridge. A long, narrow elevation of the land surface, usually sharp crested with steep sides and forming an extended upland between valleys. The term is used in areas of both hill and mountain relief.
Rill. A very small, steep-sided channel resulting from erosion and cut in unconsolidated materials by concentrated but intermittent flow of water. A rill generally is not an obstacle to wheeled vehicles and is shallow enough to be smoothed over by ordinary tillage.
Riser. The vertical or steep side slope (e.g., escarpment) of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural, steplike landforms, such as successive stream terraces.
Road cut. A sloping surface produced by mechanical means during road construction. It is commonly on the uphill side of the road.
Rock fragments. Rock or mineral fragments having a diameter of 2 millimeters or more; for example, pebbles, cobbles, stones, and boulders.
Root zone. The part of the soil that can be penetrated by plant roots.
Runoff. The precipitation discharged into stream channels from an area. The water that flows off the surface of the land without sinking into the soil is called surface runoff. Water that enters the soil before reaching surface streams is called ground-water runoff or seepage flow from ground water.
Saline soil. A soil containing soluble salts in an amount that impairs growth of plants. A saline soil does not contain excess exchangeable sodium.
Sand. As a soil separate, individual rock or mineral fragments ranging from 0.05 millimeter to 2.0 millimeters in diameter. Most sand grains consist of quartz. As a soil textural class, a soil that is 85 percent or more sand and not more than 10 percent clay.
Sandstone. Sedimentary rock containing dominantly sand-sized particles.
Sapric soil material (muck). The most highly decomposed of all organic soil material. Muck has the least amount of plant fiber, the highest bulk density, and the lowest water content at saturation of all organic soil material.
Saturated hydraulic conductivity (K_{sat}). See Permeability.
Saturation. Wetness characterized by zero or positive pressure of the soil water. Under conditions of saturation, the water will flow from the soil matrix into an unlined auger hole.
Scarification. The act of abrading, scratching, loosening, crushing, or modifying the surface to increase water absorption or to provide a more tillable soil.
Sedimentary rock. A consolidated deposit of clastic particles, chemical precipitates, or organic remains accumulated at or near the surface of the earth under normal low temperature and pressure conditions. Sedimentary rocks include consolidated equivalents of alluvium, colluvium, drift, and eolian, lacustrine, and marine deposits. Examples are sandstone, siltstone, mudstone, claystone, shale, conglomerate, limestone, dolomite, and coal.
Sequum. A sequence consisting of an illuvial horizon and the overlying eluvial horizon. (See Eluviation.)
Series, soil. A group of soils that have profiles that are almost alike, except for differences in texture of the surface layer. All the soils of a series have horizons that are similar in composition, thickness, and arrangement.
Shale. Sedimentary rock that formed by the hardening of a deposit of clay, silty clay, or silty clay loam and that has a tendency to split into thin layers.
Sheet erosion. The removal of a fairly uniform layer of soil material from the land surface by the action of rainfall and surface runoff.

Shoulder. The convex, erosional surface near the top of a hillslope. A shoulder is a transition from summit to backslope.

Shrink-swell (in tables). The shrinking of soil when dry and the swelling when wet. Shrinking and swelling can damage roads, dams, building foundations, and other structures. It can also damage plant roots.

Shrub-coppice dune. A small, streamlined dune that forms around brush and clump vegetation.

Side slope (geomorphology). A geomorphic component of hills consisting of a laterally planar area of a hillside. The overland waterflow is predominantly parallel. Side slopes are dominantly colluvium and slope-wash sediments.

Silica. A combination of silicon and oxygen. The mineral form is called quartz.

Silica-sesquioxide ratio. The ratio of the number of molecules of silica to the number of molecules of alumina and iron oxide. The more highly weathered soils or their clay fractions in warm-temperate, humid regions, and especially those in the tropics, generally have a low ratio.

Silt. As a soil separate, individual mineral particles that range in diameter from the upper limit of clay (0.002 millimeter) to the lower limit of very fine sand (0.05 millimeter). As a soil textural class, soil that is 80 percent or more silt and less than 12 percent clay.

Siltstone. An indurated silt having the texture and composition of shale but lacking its fine lamination or fissility; a massive mudstone in which silt predominates over clay.

Similar soils. Soils that share limits of diagnostic criteria, behave and perform in a similar manner, and have similar conservation needs or management requirements for the major land uses in the survey area.

Sinkhole. A closed, circular or elliptical depression, commonly funnel shaped, characterized by subsurface drainage and formed either by dissolution of the surface of underlying bedrock (e.g., limestone, gypsum, or salt) or by collapse of underlying caves within bedrock. Complexes of sinkholes in carbonate-rock terrain are the main components of karst topography.

Site index. A designation of the quality of a forest site based on the height of the dominant stand at an arbitrarily chosen age. For example, if the average height attained by dominant and codominant trees in a fully stocked stand at the age of 50 years is 75 feet, the site index is 75.

Slickensides (pedogenic). Grooved, striated, and/or glossy (shiny) slip faces on structural peds, such as wedges; produced by shrink-swell processes, most commonly in soils that have a high content of expansive clays.

Slope. The inclination of the land surface from the horizontal. Percentage of slope is the vertical distance divided by horizontal distance, then multiplied by 100. Thus, a slope of 20 percent is a drop of 20 feet in 100 feet of horizontal distance. In this survey, classes for simple slopes are as follows:

Nearly level	0 to 3 percent
Gently sloping	2 to 7 percent
Strongly sloping	7 to 15 percent
Moderately steep	15 to 25 percent
Steep	25 to 35 percent
Very steep	35 percent and higher

Slope alluvium. Sediment gradually transported down the slopes of mountains or hills primarily by nonchannel alluvial processes (i.e., slope-wash processes) and characterized by particle sorting. Lateral particle sorting is evident on long slopes. In a profile sequence, sediments may be distinguished by differences in size and/or specific gravity of rock fragments and may be separated by stone lines.

Burnished peds and sorting of rounded or subrounded pebbles or cobbles distinguish these materials from unsorted colluvial deposits.

Slow refill (in tables). The slow filling of ponds, resulting from restricted permeability in the soil.

Sodic (alkali) soil. A soil having so high a degree of alkalinity (pH 8.5 or higher) or so high a percentage of exchangeable sodium (15 percent or more of the total exchangeable bases), or both, that plant growth is restricted.

Sodicity. The degree to which a soil is affected by exchangeable sodium. Sodicity is expressed as a sodium adsorption ratio (SAR) of a saturation extract, or the ratio of Na^{+} to Ca^{++} + Mg^{++}. The degrees of sodicity and their respective ratios are:

Slight	less than 13:1
Moderate	13-30:1
Strong	more than 30:1

Sodium adsorption ratio (SAR). A measure of the amount of sodium (Na) relative to calcium (Ca) and magnesium (Mg) in the water extract from saturated soil paste. It is the ratio of the Na concentration divided by the square root of one-half of the Ca + Mg concentration.

Soft bedrock. Bedrock that can be excavated with trenching machines, backhoes, small rippers, and other equipment commonly used in construction.

Soil. A natural, three-dimensional body at the earth's surface. It is capable of supporting plants and has properties resulting from the integrated effect of climate and living matter acting on earthy parent material, as conditioned by relief and by the passage of time.

Soil crusts. Relatively thin, somewhat continuous layers of the soil surface that often restrict water movement, air entry, and seedling emergence from the soil. They generally are less than 2 inches thick and are massive.

Soil separates. Mineral particles less than 2 millimeters in equivalent diameter and ranging between specified size limits. The names and sizes, in millimeters, of separates recognized in the United States are as follows:

Very coarse sand	2.0 to 1.0
Coarse sand	1.0 to 0.5
Medium sand	0.5 to 0.25
Fine sand	0.25 to 0.10
Very fine sand	0.10 to 0.05
Silt	0.05 to 0.002
Clay	less than 0.002

Solum. The upper part of a soil profile, above the C horizon, in which the processes of soil formation are active. The solum in soil consists of the A, E, and B horizons. Generally, the characteristics of the material in these horizons are unlike those of the material below the solum. The living roots and plant and animal activities are largely confined to the solum.

Spur. A subordinate ridge or lesser elevation that projects sharply from the crest or side of a hill, mountain, or other prominent range of hills or mountains.

Stone line. In a vertical cross section, a line formed by scattered fragments or a discrete layer of angular and subangular rock fragments (commonly a gravel- or cobble-sized lag concentration) that formerly was draped across a topographic surface and was later buried by additional sediments. A stone line generally caps material that was subject to weathering, soil formation, and erosion before burial. Many stone lines seem to be buried erosion pavements, originally formed by sheet and rill erosion across the land surface.

Stones. Rock fragments 10 to 24 inches (25 to 60 centimeters) in diameter if rounded or 15 to 24 inches (38 to 60 centimeters) in length if flat.

Stony. Refers to a soil containing stones in numbers that interfere with or prevent tillage.

Strath terrace. A type of stream terrace; formed as an erosional surface cut on bedrock and thinly mantled with stream deposits (alluvium).

Stream terrace. One of a series of platforms in a stream valley, flanking and more or less parallel to the stream channel, originally formed near the level of the stream; represents the remnants of an abandoned flood plain, stream bed, or valley floor produced during a former state of fluvial erosion or deposition.

Stripcropping. Growing crops in a systematic arrangement of strips or bands that provide vegetative barriers to wind erosion and water erosion.

Structure, soil. The arrangement of primary soil particles into compound particles or aggregates. The principal forms of soil structure are—*platy* (laminated), *prismatic* (vertical axis of aggregates longer than horizontal), *columnar* (prisms with rounded tops), *blocky* (angular or subangular), and *granular*. *Structureless* soils are either *single grain* (each grain by itself, as in dune sand) or *massive* (the particles adhering without any regular cleavage, as in many hardpans).

Stubble mulch. Stubble or other crop residue left on the soil or partly worked into the soil. It protects the soil from wind erosion and water erosion after harvest, during preparation of a seedbed for the next crop, and during the early growing period of the new crop.

Subsoil. Technically, the B horizon; roughly, the part of the solum below plow depth.

Subsoiling. Tilling a soil below normal plow depth, ordinarily to shatter a hardpan or claypan.

Substratum. The part of the soil below the solum.

Subsurface layer. Any surface soil horizon (A, E, AB, or EB) below the surface layer.

Summer fallow. The tillage of uncropped land during the summer to control weeds and allow storage of moisture in the soil for the growth of a later crop. A practice common in semiarid regions, where annual precipitation is not enough to produce a crop every year. Summer fallow is frequently practiced before planting winter grain.

Summit. The topographically highest position of a hillslope. It has a nearly level (planar or only slightly convex) surface.

Surface layer. The soil ordinarily moved in tillage, or its equivalent in uncultivated soil, ranging in depth from 4 to 10 inches (10 to 25 centimeters). Frequently designated as the “plow layer,” or the “Ap horizon.”

Surface soil. The A, E, AB, and EB horizons, considered collectively. It includes all subdivisions of these horizons.

Talus. Rock fragments of any size or shape (commonly coarse and angular) derived from and lying at the base of a cliff or very steep rock slope. The accumulated mass of such loose broken rock formed chiefly by falling, rolling, or sliding.

Terrace (conservation). An embankment, or ridge, constructed across sloping soils on the contour or at a slight angle to the contour. The terrace intercepts surface runoff so that water soaks into the soil or flows slowly to a prepared outlet. A terrace in a field generally is built so that the field can be farmed. A terrace intended mainly for drainage has a deep channel that is maintained in permanent sod.

Terrace (geomorphology). A steplike surface, bordering a valley floor or shoreline, that represents the former position of a flood plain, lake, or seashore. The term is usually applied both to the relatively flat summit surface (tread) that was cut or built by stream or wave action and to the steeper descending slope (scarp or riser) that has graded to a lower base level of erosion.

Terracettes. Small, irregular steplike forms on steep hillslopes, especially in pasture, formed by creep or erosion of surficial materials that may be induced or enhanced by trampling of livestock, such as sheep or cattle.

Texture, soil. The relative proportions of sand, silt, and clay particles in a mass of soil.

The basic textural classes, in order of increasing proportion of fine particles, are *sand, loamy sand, sandy loam, loam, silt loam, silt, sandy clay loam, clay loam, silty clay loam, sandy clay, silty clay,* and *clay*. The sand, loamy sand, and sandy loam classes may be further divided by specifying “coarse,” “fine,” or “very fine.”

Thin layer (in tables). Otherwise suitable soil material that is too thin for the specified use.

Tilth, soil. The physical condition of the soil as related to tillage, seedbed preparation, seedling emergence, and root penetration.

Toeslope. The gently inclined surface at the base of a hillslope. Toeslopes in profile are commonly gentle and linear and are constructional surfaces forming the lower part of a hillslope continuum that grades to valley or closed-depression floors.

Topsoil. The upper part of the soil, which is the most favorable material for plant growth. It is ordinarily rich in organic matter and is used to topdress roadbanks, lawns, and land affected by mining.

Trace elements. Chemical elements, for example, zinc, cobalt, manganese, copper, and iron, in soils in extremely small amounts. They are essential to plant growth.

Tread. The flat to gently sloping, topmost, laterally extensive slope of terraces, flood-plain steps, or other stepped landforms; commonly a recurring part of a series of natural steplike landforms, such as successive stream terraces.

Upland. An informal, general term for the higher ground of a region, in contrast with a low-lying adjacent area, such as a valley or plain, or for land at a higher elevation than the flood plain or low stream terrace; land above the footslope zone of the hillslope continuum.

Valley fill. The unconsolidated sediment deposited by any agent (water, wind, ice, or mass wasting) so as to fill or partly fill a valley.

Variegation. Refers to patterns of contrasting colors assumed to be inherited from the parent material rather than to be the result of poor drainage.

Varve. A sedimentary layer or a lamina or sequence of laminae deposited in a body of still water within a year. Specifically, a thin pair of graded glaciolacustrine layers seasonally deposited, usually by meltwater streams, in a glacial lake or other body of still water in front of a glacier.

Water bars. Smooth, shallow ditches or depressional areas that are excavated at an angle across a sloping road. They are used to reduce the downward velocity of water and divert it off and away from the road surface. Water bars can easily be driven over if constructed properly.

Weathering. All physical disintegration, chemical decomposition, and biologically induced changes in rocks or other deposits at or near the earth’s surface by atmospheric or biologic agents or by circulating surface waters but involving essentially no transport of the altered material.

Well graded. Refers to soil material consisting of coarse-grained particles that are well distributed over a wide range in size or diameter. Such soil normally can be easily increased in density and bearing properties by compaction. Contrasts with poorly graded soil.

Wilting point (or permanent wilting point). The moisture content of soil, on an ovendry basis, at which a plant (specifically a sunflower) wilts so much that it does not recover when placed in a humid, dark chamber.

Windthrow. The uprooting and tipping over of trees by the wind.

Tables

Table 1.—Temperature and Precipitation

(Recorded in the period 1961-90 at Transou, North Carolina)

Month	Temperature						Precipitation				
	Average daily maximum	Average daily minimum	Average daily	2 years in 10 will have-- Maximum temp. higher than--	2 years in 10 will have-- Minimum temp. lower than--	Average number of growing degree days*	Average	2 years in 10 will have-- Less than--	2 years in 10 will have-- More than--	Average number of days with 0.10 inch or more	Average snow-fall
	°F	°F	°F	°F	°F	Units	In	In	In		In
January--	41.9	20.6	31.2	63	-10	2	3.53	2.24	4.71	7	8.6
February-	45.0	22.7	33.9	67	-2	5	4.02	2.10	5.70	6	7.8
March----	54.5	30.4	42.5	75	8	31	5.23	2.99	7.21	7	3.0
April----	63.3	37.4	50.4	81	17	107	4.40	2.46	6.12	7	0.9
May------	70.6	45.4	58.0	82	25	260	5.42	3.59	7.09	8	0.0
June-----	76.7	52.6	64.7	86	34	440	4.62	2.43	6.54	7	0.0
July-----	76.9	56.7	68.1	88	40	561	4.87	3.01	6.54	8	0.0
August---	78.5	55.7	67.1	88	39	530	4.50	2.25	6.46	7	0.0
September	72.7	49.6	61.2	83	29	340	4.71	2.19	6.89	6	0.0
October--	63.7	38.4	51.1	78	18	115	5.06	2.11	7.57	5	0.2
November-	54.1	31.2	42.7	71	9	26	4.55	2.46	6.39	6	1.2
December-	45.3	24.0	34.7	65	-2	7	3.84	1.96	5.47	6	4.3
Yearly:											
Average	62.2	38.7	50.4	---	---	---	---	---	---	---	---
Extreme	93	-24	---	89	-11	---	---	---	---	---	---
Total--	---	---	---	---	---	2,425	54.75	46.42	62.52	80	26.1

* A growing degree day is a unit of heat available for plant growth. It can be calculated by adding the maximum and minimum daily temperatures, dividing the sum by 2, and subtracting the temperature below which growth is minimal for the principal crops in the area (50 degrees F).

Table 2.—Freeze Dates in Spring and Fall

(Recorded in the period 1961-90 at Transou, North Carolina)

Probability	Temperature		
	24 °F or lower	28 °F or lower	32 °F or lower
Last freezing temperature in spring:			
1 year in 10 later than--	May 1	May 17	June 3
2 years in 10 later than--	Apr. 26	May 12	May 28
5 years in 10 later than--	Apr. 15	May 1	May 16
First freezing temperature in fall:			
1 year in 10 earlier than--	Oct. 4	Sept. 24	Sept. 13
2 years in 10 earlier than--	Oct. 9	Sept. 28	Sept. 17
5 years in 10 earlier than-	Oct. 18	Oct. 5	Sept. 27

Table 3.—Growing Season

(Recorded in the period 1961-90 at Transou, North Carolina)

Probability	Daily minimum temperature during growing season		
	Higher than 24 °F	Higher than 28 °F	Higher than 32 °F
	Days	Days	Days
9 years in 10	165	136	113
8 years in 10	172	143	120
5 years in 10	185	156	132
2 years in 10	198	169	145
1 year in 10	204	176	152

Table 4.—Acreage and Proportionate Extent of the Soils

Map symbol	Soil name	Acres	Percent
1C	Balsam cobbly loam, 2 to 15 percent slopes, very bouldery	71	*
1D	Balsam cobbly loam, 15 to 35 percent slopes, very bouldery	340	0.1
1E	Balsam cobbly loam, 35 to 55 percent slopes, very bouldery	650	0.3
2D	Balsam-Nopan complex, 15 to 35 percent slopes, very bouldery	173	*
2E	Balsam-Nopan complex, 35 to 55 percent slopes, very bouldery	142	*
3D	Bloodyhorse gravelly loam, 7 to 35 percent slopes, very bouldery	496	0.2
4F	Bloodyhorse gravelly loam, 35 to 80 percent slopes, extremely bouldery	410	0.2
5B	Braddock loam, 2 to 7 percent slopes	282	0.1
5C	Braddock loam, 7 to 15 percent slopes	940	0.4
5D	Braddock loam, 15 to 25 percent slopes	218	*
6E	Braddock cobbly loam, 25 to 35 percent slopes	313	0.1
7D	Brevard-Greenlee complex, 8 to 25 percent slopes, very bouldery	20	*
8C	Burton loam, 7 to 15 percent slopes, stony	16	*
9D	Burton loam, 15 to 35 percent slopes, very stony	50	*
9E	Burton loam, 35 to 55 percent slopes, very stony	134	*
10D	Chestnut-Peaks complex, 8 to 25 percent slopes, very rocky	48	*
10E	Chestnut-Peaks complex, 25 to 45 percent slopes, very rocky	154	*
11F	Chestnut-Peaks-Tuckasegee complex, 45 to 90 percent slopes, very rocky	93	*
12A	Codorus loam, 0 to 3 percent slopes, frequently flooded	4,709	1.9
13A	Comus fine sandy loam, 0 to 3 percent slopes, frequently flooded	2,154	0.9
14C	Cowee loam, 7 to 15 percent slopes	1,123	0.4
14D	Cowee loam, 15 to 35 percent slopes	3,006	1.2
14E	Cowee loam, 35 to 55 percent slopes	3,658	1.4
15D	Cowee gravelly loam, 7 to 35 percent slopes, stony	419	0.2
15E	Cowee gravelly loam, 35 to 55 percent slopes, stony	847	0.3
16D	Cowee-Rock outcrop complex, 7 to 35 percent slopes	45	*
16E	Cowee-Rock outcrop complex, 35 to 55 percent slopes	369	0.1
17A	Craigsville cobbly sandy loam, 0 to 3 percent slopes, frequently flooded	636	0.3
18C	Cullasaja cobbly loam, 7 to 15 percent slopes, very stony	10	*
18D	Cullasaja cobbly loam, 15 to 35 percent slopes, very stony	1	*
19A	Delanco fine sandy loam, 0 to 2 percent slopes, rarely flooded	675	0.3
19B	Delanco fine sandy loam, 2 to 7 percent slopes, rarely flooded	2,173	0.9
20C	Delanco fine sandy loam, 7 to 15 percent slopes	477	0.2
21B	Edneytown loam, 2 to 7 percent slopes	887	0.4
21C	Edneytown loam, 7 to 15 percent slopes	14,139	5.6
21D	Edneytown loam, 15 to 25 percent slopes	18,610	7.4
21E	Edneytown loam, 25 to 35 percent slopes	7,659	3.0
21F	Edneytown loam, 35 to 55 percent slopes	561	0.2
22C	Edneytown-Urban land complex, 0 to 15 percent slopes	813	0.3
23C	Edneyville loam, 7 to 15 percent slopes	2,146	0.8
23D	Edneyville loam, 15 to 35 percent slopes	7,419	2.9
23E	Edneyville loam, 35 to 55 percent slopes	4,977	2.0
24D	Edneyville loam, 15 to 35 percent slopes, very stony	6,242	2.5
24E	Edneyville loam, 35 to 55 percent slopes, very stony	11,012	4.4
24F	Edneyville loam, 55 to 80 percent slopes, very stony	1,558	0.6
25B	Elsinboro fine sandy loam, 2 to 7 percent slopes, rarely flooded	456	0.2
26B	Elsinboro-Urban land complex, 0 to 7 percent slopes, rarely flooded	162	*
27D	Evard-Cowee complex, 15 to 25 percent slopes, stony	9	*
28B	Glenelg loam, 2 to 7 percent slopes	337	0.1
28C	Glenelg loam, 7 to 15 percent slopes	7,642	3.0
28D	Glenelg loam, 15 to 25 percent slopes	7,331	2.9
28E	Glenelg loam, 25 to 35 percent slopes	7,671	3.0
28F	Glenelg loam, 35 to 55 percent slopes	1,053	0.4
29C	Glenelg gravelly loam, 7 to 15 percent slopes, very stony	460	0.2
29D	Glenelg gravelly loam, 15 to 35 percent slopes, very stony	1,383	0.5
29E	Glenelg gravelly loam, 35 to 55 percent slopes, very stony	2,834	1.1
30C	Glenelg-Urban land complex, 0 to 15 percent slopes	715	0.3
31D	Greenlee very cobbly loam, 15 to 35 percent slopes, very stony	373	0.1
31E	Greenlee very cobbly loam, 35 to 55 percent slopes, very stony	110	*
32A	Hatboro sandy loam, 0 to 3 percent slopes, frequently flooded	3,720	1.5
33B	Hayesville loam, 2 to 7 percent slopes	2,734	1.1
33C	Hayesville loam, 7 to 15 percent slopes	7,530	3.0

See footnote at end of table.

Table 4.—Acreage and Proportionate Extent of the Soils—Continued

Map symbol	Soil name	Acres	Percent
33D	Hayesville loam, 15 to 25 percent slopes	812	0.3
34B	Keener loam, 2 to 7 percent slopes	105	*
34C	Keener loam, 7 to 15 percent slopes	141	*
34D	Keener loam, 15 to 25 percent slopes	321	0.1
35C	Keener loam, 7 to 15 percent slopes, very stony	170	*
35D	Keener loam, 15 to 35 percent slopes, very stony	1,183	0.5
36A	Kinkora fine sandy loam, 0 to 3 percent slopes, rarely flooded	621	0.2
37C	Konnarock channery silt loam, 7 to 15 percent slopes	222	*
37D	Konnarock channery silt loam, 15 to 35 percent slopes	1,063	0.4
37E	Konnarock channery silt loam, 35 to 55 percent slopes	989	0.4
38C	McCamy fine sandy loam, 7 to 15 percent slopes	248	*
38D	McCamy fine sandy loam, 15 to 35 percent slopes	543	0.2
39D	McCamy fine sandy loam, 7 to 35 percent slopes, very stony	532	0.2
39E	McCamy fine sandy loam, 35 to 55 percent slopes, very stony	427	0.2
40D	Mt Rogers-Bloodyhorse-Rock outcrop complex, 7 to 35 percent slopes, rubbly, windswept	77	*
40F	Mt Rogers-Bloodyhorse-Rock outcrop complex, 35 to 80 percent slopes, rubbly, windswept	255	0.1
41C	Mt Rogers-Buzzrock complex, 7 to 15 percent slopes, very bouldery, windswept	171	*
41D	Mt Rogers-Buzzrock complex, 15 to 35 percent slopes, very bouldery, windswept	623	0.2
42C	Peaks very gravelly loam, 7 to 15 percent slopes	635	0.3
42D	Peaks very gravelly loam, 15 to 35 percent slopes	4,739	1.9
42E	Peaks very gravelly loam, 35 to 55 percent slopes	12,340	4.9
43C	Peaks very gravelly loam, 7 to 15 percent slopes, extremely stony	245	*
43D	Peaks very gravelly loam, 15 to 35 percent slopes, extremely stony	3,718	1.5
43E	Peaks very gravelly loam, 35 to 55 percent slopes, extremely stony	15,241	6.0
43F	Peaks very gravelly loam, 55 to 80 percent slopes, extremely stony	9,992	4.0
44C	Pigeonroost loam, 7 to 15 percent slopes	2,300	0.9
44D	Pigeonroost loam, 15 to 35 percent slopes	7,243	2.9
44E	Pigeonroost loam, 35 to 55 percent slopes	5,734	2.3
45D	Pigeonroost gravelly loam, 7 to 35 percent slopes, very stony	1,978	0.8
45E	Pigeonroost gravelly loam, 35 to 55 percent slopes, very stony	2,763	1.1
46E	Pigeonroost-Rock outcrop complex, 25 to 55 percent slopes	731	0.3
47D	Pineola loam, 15 to 35 percent slopes	71	*
48E	Pineola loam, 35 to 55 percent slopes, very stony	309	0.1
49	Pits, quarries	15	*
50F	Rock outcrop-Peaks complex, 25 to 80 percent slopes	1,550	0.6
51B	Scales mucky peak, 0 to 7 percent slopes, very bouldery	18	*
52C	Sylco-Sylvatus complex, 7 to 15 percent slopes	169	*
52D	Sylco-Sylvatus complex, 15 to 35 percent slopes	1,386	0.5
52E	Sylco-Sylvatus complex, 35 to 55 percent slopes	1,841	0.7
53B	Tate loam, 2 to 7 percent slopes	3,707	1.5
53C	Tate loam, 7 to 15 percent slopes	7,917	3.1
53D	Tate loam, 15 to 25 percent slopes	3,793	1.5
53E	Tate loam, 25 to 35 percent slopes	360	0.1
54C	Tate loam, 7 to 15 percent slopes, stony	683	0.3
54D	Tate loam, 15 to 35 percent slopes, stony	2,181	0.9
54E	Tate loam, 35 to 55 percent slopes, stony	274	0.1
55D	Tate loam, 7 to 35 percent slopes, extremely bouldery	1,033	0.4
56C	Thunder cobbly loam, 2 to 15 percent slopes	35	*
56D	Thunder cobbly loam, 15 to 35 percent slopes	102	*
56E	Thunder cobbly loam, 35 to 55 percent slopes	113	*
57C	Thunder cobbly loam, 2 to 15 percent slopes, very bouldery	43	*
57D	Thunder cobbly loam, 15 to 35 percent slopes, very bouldery	413	0.2
57E	Thunder cobbly loam, 35 to 55 percent slopes, very bouldery	598	0.2
58D	Udorthents-Urban land complex, 0 to 25 percent slopes	351	0.1
59D	Unicoi very gravelly sandy loam, 7 to 35 percent slopes, extremely stony	343	0.1
59E	Unicoi very gravelly sandy loam, 35 to 55 percent slopes, extremely stony	1,580	0.6
W	Water	2,458	1.0
	Total	252,900	100.0

* Less than 0.1 percent.

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture

(Yields are those that can be expected under a high level of management. They are for nonirrigated areas. Absence of a yield indicates that the soil is not suited to the crop or the crop generally is not grown on the soil)

Map symbol and soil name	Land capability	Virginia Soil Management Group	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture	Tobacco
			Tons	Bu	Tons	Tons	AUM	Lbs
1C:								
Balsam------------	7s	GG	---	---	---	---	---	---
1D:								
Balsam------------	7s	GG	---	---	---	---	---	---
1E:								
Balsam------------	7e	GG	---	---	---	---	---	---
2D:								
Balsam------------	7s	GG	---	---	---	---	---	---
Nopan-------------	7s	NN	---	---	---	---	---	---
2E:								
Balsam------------	7e	GG	---	---	---	---	---	---
Nopan-------------	7e	NN	---	---	---	---	---	---
3D:								
Bloodyhorse-------	7s	JJ	---	---	---	---	---	---
4F:								
Bloodyhorse-------	7e	JJ	---	---	---	---	---	---
5B:								
Braddock----------	2e	O	5.5	130	21.0	4.0	10.6	---
5C:								
Braddock----------	3e	O	4.8	114	19.0	3.5	10.6	---
5D:								
Braddock----------	4e	O	4.4	104	18.0	3.2	9.3	---
6E:								
Braddock----------	7s	O	---	---	---	---	---	---
7D:								
Brevard-----------	7s	B	---	---	---	---	---	---
Greenlee----------	7s	CC	---	---	---	---	---	---

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia Soil Management Group	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture	Tobacco
			Tons	Bu	Tons	Tons	AUM	Lbs
8C:								
Burton	4s	FF	---	---	---	2.2	2.0	---
9D:								
Burton	7s	FF	---	---	---	---	---	---
9E:								
Burton	7e	FF	---	---	---	---	---	---
10D:								
Chestnut	6s	GG	---	---	---	---	5.0	---
Peaks	6s	JJ	---	---	---	---	5.0	---
10E:								
Chestnut	7e	GG	---	---	---	---	---	---
Peaks	7e	JJ	---	---	---	---	---	---
11F:								
Chestnut	7e	GG	---	---	---	---	---	---
Peaks	7e	JJ	---	---	---	---	---	---
Tuckasegee	7e	G	---	---	---	---	---	---
12A:								
Codorus	6w	A	---	---	---	---	8.1	---
13A:								
Comus	2w	A	6.0	160	23.0	4.5	10.5	---
14C:								
Cowee	3e	N	4.8	114	19.0	3.5	6.0	---
14D:								
Cowee	6e	N	---	---	---	---	5.5	---
14E:								
Cowee	7e	N	---	---	---	---	---	---
15D:								
Cowee	7s	N	---	---	---	---	---	---
15E:								
Cowee	7e	N	---	---	---	---	---	---

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia Soil Management Group	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture	Tobacco
			Tons	Bu	Tons	Tons	AUM	Lbs
16D:								
Cowee	7s	N	---	---	---	---	---	---
Rock outcrop	8	---	---	---	---	---	---	---
16E:								
Cowee	7s	N	---	---	---	---	---	---
Rock outcrop	8	---	---	---	---	---	---	---
17A:								
Craigsville	2w	CC	---	72	15.0	3.0	4.5	---
18C:								
Cullasaja	6s	FF	---	---	---	---	5.5	---
18D:								
Cullasaja	7s	FF	---	---	---	---	---	---
19A:								
Delanco	2w	B	5.5	160	23.0	4.5	8.5	2,660
19B:								
Delanco	2e	B	5.5	160	23.0	4.5	8.5	2,500
20C:								
Delanco	3e	B	4.8	140	22.0	4.0	8.5	2,400
21B:								
Edneytown	2e	L	5.5	130	21.0	4.0	10.5	2,800
21C:								
Edneytown	3e	L	4.8	114	19.0	3.5	10.5	2,700
21D:								
Edneytown	4e	L	4.4	104	18.0	3.2	9.5	2,600
21E:								
Edneytown	6e	L	---	---	---	---	8.5	---
21F:								
Edneytown	7e	L	---	---	---	---	---	---
22C:								
Edneytown	3e	L	---	---	---	---	---	---
Urban land	8	---	---	---	---	---	---	---

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia Soil Management Group	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture	Tobacco
			Tons	Bu	Tons	Tons	AUM	Lbs
23C:								
Edneyville--------	3e	GG	---	75	15.0	3.1	9.5	2,300
23D:								
Edneyville--------	6e	GG	---	---	---	---	9.5	---
23E:								
Edneyville--------	7e	GG	---	---	---	---	---	---
24D:								
Edneyville--------	7s	GG	---	---	---	---	---	---
24E:								
Edneyville--------	7e	GG	---	---	---	---	---	---
24F:								
Edneyville--------	7e	GG	---	---	---	---	---	---
25B:								
Elsinboro---------	2e	L	5.5	130	21.0	4.0	9.5	2,800
26B:								
Elsinboro---------	2e	L	---	---	---	---	---	---
Urban land--------	8	---	---	---	---	---	---	---
27D:								
Evard-------------	6s	L	---	---	---	---	5.0	---
Cowee-------------	6s	N	---	---	---	---	4.5	---
28B:								
Glenelg-----------	2e	N	5.5	130	21.0	4.0	10.5	2,700
28C:								
Glenelg-----------	3e	N	4.8	114	19.0	3.5	9.5	2,600
28D:								
Glenelg-----------	4e	N	4.4	104	18.0	3.2	8.5	2,400
28E:								
Glenelg-----------	6e	N	---	---	---	---	7.5	---
28F:								
Glenelg-----------	7e	N	---	---	---	---	---	---

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia Soil Management Group	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture	Tobacco
			Tons	Bu	Tons	Tons	AUM	Lbs
29C:								
Glenelg-----------	6s	N	---	---	---	---	6.5	---
29D:								
Glenelg-----------	7s	N	---	---	---	---	---	---
29E:								
Glenelg-----------	7e	N	---	---	---	---	---	---
30C:								
Glenelg-----------	3e	N	---	---	---	---	---	---
Urban land--------	8	---	---	---	---	---	---	---
31D:								
Greenlee----------	7s	CC	---	---	---	---	---	---
31E:								
Greenlee----------	7e	CC	---	---	---	---	---	---
32A:								
Hatboro-----------	6w	HH	---	---	---	---	3.5	---
33B:								
Hayesville--------	2e	X	4.0	100	18.0	3.5	12.0	2,800
33C:								
Hayesville--------	3e	X	3.5	88	16.0	3.1	8.0	2,600
33D:								
Hayesville--------	4e	X	3.2	80	16.0	2.8	6.6	---
34B:								
Keener------------	2e	O	5.5	130	21.0	4.0	8.5	2,200
34C:								
Keener------------	3e	O	4.8	114	19.0	3.5	8.5	2,100
34D:								
Keener------------	4e	O	4.4	104	18.0	3.2	7.5	2,000
35C:								
Keener------------	6s	O	---	---	---	---	6.0	---
35D:								
Keener------------	7s	O	---	---	---	---	---	---

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia Soil Management Group	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture	Tobacco
			Tons	Bu	Tons	Tons	AUM	Lbs
36A:								
Kinkora	4w	OO	---	65	14.0	---	3.5	---
37C:								
Konnarock	3e	JJ	---	49	12.0	2.2	5.5	---
37D:								
Konnarock	6e	JJ	---	---	---	---	5.5	---
37E:								
Konnarock	7e	JJ	---	---	---	---	---	---
38C:								
McCamy	3e	FF	---	75	15.0	3.1	5.5	---
38D:								
McCamy	6e	FF	---	---	---	---	5.5	---
39D:								
McCamy	7s	FF	---	---	---	---	---	---
39E:								
McCamy	7e	FF	---	---	---	---	---	---
40D:								
Mt Rogers	7s	GG	---	---	---	---	---	---
Bloodyhorse	7s	JJ	---	---	---	---	---	---
Rock outcrop	8	---	---	---	---	---	---	---
40F:								
Mt Rogers	7s	GG	---	---	---	---	---	---
Bloodyhorse	7s	JJ	---	---	---	---	---	---
Rock outcrop	8	---	---	---	---	---	---	---
41C:								
Mt Rogers	7s	GG	---	---	---	---	---	---
Buzzrock	7s	JJ	---	---	---	---	---	---
41D:								
Mt Rogers	7s	GG	---	---	---	---	---	---
Buzzrock	7s	JJ	---	---	---	---	---	---

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia Soil Management Group	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture	Tobacco
			Tons	Bu	Tons	Tons	AUM	Lbs
42C:								
Peaks-------------	6s	JJ	---	---	---	---	6.5	---
42D:								
Peaks-------------	7s	JJ	---	---	---	---	---	---
42E:								
Peaks-------------	7e	JJ	---	---	---	---	---	---
43C:								
Peaks-------------	7s	JJ	---	---	---	---	---	---
43D:								
Peaks-------------	7s	JJ	---	---	---	---	---	---
43E:								
Peaks-------------	7e	JJ	---	---	---	---	---	---
43F:								
Peaks-------------	7e	JJ	---	---	---	---	---	---
44C:								
Pigeonroost-------	3e	N	4.8	114	19.0	3.5	8.5	---
44D:								
Pigeonroost-------	6e	N	---	---	---	---	8.5	---
44E:								
Pigeonroost-------	7e	N	---	---	---	---	---	---
45D:								
Pigeonroost-------	7s	N	---	---	---	---	---	---
45E:								
Pigeonroost-------	7e	N	---	---	---	---	---	---
46E:								
Pigeonroost-------	7s	N	---	---	---	---	---	---
Rock outcrop------	8	---	---	---	---	---	---	---
47D:								
Pineola-----------	6e	L	---	---	---	---	5.5	---
48E:								
Pineola-----------	7e	L	---	---	---	---	---	---

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia Soil Management Group	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture	Tobacco
			Tons	Bu	Tons	Tons	AUM	Lbs
49:								
Pits, quarries----	8	---	---	---	---	---	---	---
50F:		---						
Rock outcrop------	8		---	---	---	---	---	---
Peaks-------------	7s	JJ	---	---	---	---	---	---
51B:								
Scales------------	6s	---	---	---	---	---	2.0	---
52C:								
Sylco-------------	3e	JJ	---	---	---	---	2.0	---
Sylvatus----------	6s	JJ	---	---	---	---	1.5	---
52D:								
Sylco-------------	6e	JJ	---	---	---	---	1.5	---
Sylvatus----------	6e	JJ	---	---	---	---	1.0	---
52E:								
Sylco-------------	7e	JJ	---	---	---	---	---	---
Sylvatus----------	7e	JJ	---	---	---	---	---	---
53B:								
Tate--------------	2e	O	5.5	130	21.0	4.0	12.0	2,900
53C:								
Tate--------------	3e	O	4.8	114	19.0	3.5	11.0	2,700
53D:								
Tate--------------	4e	O	4.4	104	18.0	3.2	10.0	2,500
53E:								
Tate--------------	6e	O	---	---	---	---	8.0	---
54C:								
Tate--------------	4s	O	---	---	---	3.0	9.5	---
54D:								
Tate--------------	7s	O	---	---	---	---	---	---
54E:								
Tate--------------	7e	O	---	---	---	---	---	---

Table 5.—Land Capability, Virginia Soil Management Group, and Yields per Acre of Crops and Pasture—Continued

Map symbol and soil name	Land capability	Virginia Soil Management Group	Alfalfa hay	Corn	Corn silage	Grass-legume hay	Pasture	Tobacco
			Tons	Bu	Tons	Tons	AUM	Lbs
55D:								
Tate	7s	O	---	---	---	---	---	---
56C:								
Thunder	4s	GG	---	64	14.0	2.6	7.0	---
56D:								
Thunder	7s	GG	---	---	---	---	---	---
56E:								
Thunder	7e	GG	---	---	---	---	---	---
57C:								
Thunder	7s	GG	---	---	---	---	---	---
57D:								
Thunder	7s	GG	---	---	---	---	---	---
57E:								
Thunder	7e	GG	---	---	---	---	---	---
58D:								
Udorthents.								
Urban land	8	---	---	---	---	---	---	---
59D:								
Unicoi	7s	JJ	---	---	---	---	---	---
59E:								
Unicoi	7e	JJ	---	---	---	---	---	---
W.								
Water								

Table 6.—Prime Farmland

(Only the soils considered prime farmland are listed. Urban or built-up areas of the soils listed are not considered prime farmland. If a soil is prime farmland only under certain conditions, the conditions are specified in parentheses after the soil name)

Map symbol	Map unit name
5B	Braddock loam, 2 to 7 percent slopes
19A	Delanco fine sandy loam, 0 to 2 percent slopes, rarely flooded (if drained)
19B	Delanco fine sandy loam, 2 to 7 percent slopes, rarely flooded (if drained)
21B	Edneytown loam, 2 to 7 percent slopes
25B	Elsinboro fine sandy loam, 2 to 7 percent slopes, rarely flooded
28B	Glenelg loam, 2 to 7 percent slopes
33B	Hayesville loam, 2 to 7 percent slopes
34B	Keener loam, 2 to 7 percent slopes
53B	Tate loam, 2 to 7 percent slopes

Table 7.—Agricultural Waste Management, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1C:					
Balsam	85	Very limited		Very limited	
		Cobble content	1.00	Cobble content	1.00
		Too acid	0.62	Too acid	1.00
		Large stones content	0.47	Slope	0.04
1D:					
Balsam	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Cobble content	1.00	Cobble content	1.00
		Too acid	0.62	Too acid	1.00
1E:					
Balsam	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Cobble content	1.00	Cobble content	1.00
		Too acid	0.62	Too acid	1.00
2D:					
Balsam	70	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Cobble content	1.00	Cobble content	1.00
		Too acid	0.62	Too acid	1.00
Nopan	20	Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Slow water movement	1.00
2E:					
Balsam	70	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Cobble content	1.00	Cobble content	1.00
		Too acid	0.62	Too acid	1.00
Nopan	20	Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Slow water movement	1.00
3D:					
Bloodyhorse	80	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.98	Too acid	1.00
		Too acid	0.73	Slope	1.00

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
4F:					
Bloodyhorse----------	80	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
		Droughty	0.98	Too acid	1.00
5B:					
Braddock------------	90	Somewhat limited		Somewhat limited	
		Too acid	0.02	Too acid	0.07
5C:					
Braddock------------	90	Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37
		Too acid	0.02	Too acid	0.07
5D:					
Braddock------------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.02	Too acid	0.07
6E:					
Braddock------------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Cobble content	0.40	Cobble content	0.40
		Too acid	0.02	Too acid	0.07
7D:					
Brevard-------------	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.47	Too acid	0.91
		Too acid	0.32	Large stones on the surface	0.08
Greenlee------------	35	Very limited		Very limited	
		Cobble content	1.00	Cobble content	1.00
		Slope	1.00	Too acid	1.00
		Too acid	0.73	Slope	1.00
8C:					
Burton--------------	90	Somewhat limited		Very limited	
		Depth to bedrock	0.80	Low adsorption	1.00
		Droughty	0.73	Too acid	1.00
		Slope	0.63	Depth to bedrock	0.80
9D:					
Burton--------------	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Depth to bedrock	0.80	Slope	1.00
		Droughty	0.73	Too acid	1.00
9E:					
Burton--------------	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Depth to bedrock	0.80	Slope	1.00
		Droughty	0.73	Too acid	1.00

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
10D:					
Peaks	20	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Slope	1.00	Droughty	1.00
		Filtering capacity	0.99	Slope	1.00
Chestnut	65	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.83	Slope	1.00
		Depth to bedrock	0.54	Too acid	0.99
10E:					
Chestnut	65	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.83	Slope	1.00
		Depth to bedrock	0.54	Too acid	0.99
Peaks	20	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Filtering capacity	0.99	Droughty	1.00
11F:					
Chestnut	40	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.83	Slope	1.00
		Depth to bedrock	0.54	Too acid	0.99
Peaks	25	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Filtering capacity	0.99	Droughty	1.00
Tuckasegee	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Leaching	0.45	Too acid	0.21
		Too acid	0.05		
12A:					
Codorus	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00
		Too acid	0.05	Too acid	0.21
13A:					
Comus	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Too acid	0.32	Too acid	0.91
14C:					
Cowee	90	Somewhat limited		Very limited	
		Droughty	0.55	Low adsorption	1.00
		Too acid	0.37	Too acid	0.96
		Slope	0.37	Droughty	0.55

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
14D:					
Cowee	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.55	Slope	1.00
		Too acid	0.37	Too acid	0.96
14E:					
Cowee	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.55	Slope	1.00
		Too acid	0.37	Too acid	0.96
15D:					
Cowee	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.95	Slope	1.00
		Too acid	0.37	Too acid	0.96
15E:					
Cowee	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.95	Slope	1.00
		Too acid	0.37	Too acid	0.96
16D:					
Cowee	60	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.55	Slope	1.00
		Too acid	0.37	Too acid	0.96
Rock outcrop	35	Not rated		Not rated	
16E:					
Cowee	60	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.55	Slope	1.00
		Too acid	0.37	Too acid	0.96
Rock outcrop	35	Not rated		Not rated	
17A:					
Craigsville	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
		Droughty	0.78	Too acid	0.96
18C:					
Cullasaja	85	Somewhat limited		Very limited	
		Cobble content	0.87	Too acid	1.00
		Too acid	0.62	Cobble content	0.87
		Large stones content	0.47	Slope	0.37
18D:					
Cullasaja	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Cobble content	0.87	Too acid	1.00
		Too acid	0.62	Cobble content	0.87

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
19A:					
Delanco	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	0.73	Too acid	1.00
		Slow water movement	0.50	Flooding	0.40
19B:					
Delanco	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	0.73	Too acid	1.00
		Slow water movement	0.50	Flooding	0.40
20C:					
Delanco	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	0.73	Too acid	1.00
		Slow water movement	0.50	Slow water movement	0.37
21B:					
Edneytown	90	Somewhat limited		Somewhat limited	
		Too acid	0.37	Too acid	0.96
21C:					
Edneytown	90	Somewhat limited		Somewhat limited	
		Too acid	0.37	Too acid	0.96
		Slope	0.37	Slope	0.37
21D:					
Edneytown	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.37	Too acid	0.96
21E:					
Edneytown	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.37	Too acid	0.96
21F:					
Edneytown	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.37	Too acid	0.96
22C:					
Edneytown	60	Somewhat limited		Somewhat limited	
		Too acid	0.37	Too acid	0.96
		Slope	0.01	Slope	0.01
Urban land	35	Not rated		Not rated	
23C:					
Edneyville	90	Somewhat limited		Somewhat limited	
		Slope	0.37	Too acid	0.91
		Too acid	0.32	Slope	0.37

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
23D:					
Edneyville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.32	Too acid	0.91
23E:					
Edneyville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.32	Too acid	0.91
24D:					
Edneyville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.53	Too acid	0.91
		Too acid	0.32		
24E:					
Edneyville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.53	Too acid	0.91
		Too acid	0.32		
24F:					
Edneyville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.53	Too acid	0.91
		Too acid	0.32		
25B:					
Elsinboro-----------	90	Somewhat limited		Somewhat limited	
		Too acid	0.37	Too acid	0.96
				Flooding	0.40
26B:					
Elsinboro-----------	60	Somewhat limited		Somewhat limited	
		Too acid	0.37	Too acid	0.96
				Flooding	0.40
Urban land----------	35	Not rated		Not rated	
27D:					
Evard---------------	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.50	Too acid	0.99
Cowee---------------	35	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.95	Slope	1.00
		Too acid	0.37	Too acid	0.96
28B:					
Glenelg-------------	90	Somewhat limited		Somewhat limited	
		Too acid	0.02	Too acid	0.07

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
28C:					
Glenelg	90	Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37
		Too acid	0.02	Too acid	0.07
28D:					
Glenelg	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.02	Too acid	0.07
28E:					
Glenelg	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.02	Too acid	0.07
28F:					
Glenelg	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.02	Too acid	0.07
29C:					
Glenelg	90	Somewhat limited		Somewhat limited	
		Large stones content	0.53	Slope	0.37
		Slope	0.37	Too acid	0.07
		Too acid	0.02		
29D:					
Glenelg	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.53	Too acid	0.07
		Too acid	0.02		
29E:					
Glenelg	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.53	Too acid	0.07
		Too acid	0.02		
30C:					
Glenelg	60	Somewhat limited		Somewhat limited	
		Too acid	0.02	Too acid	0.07
		Slope	0.01	Slope	0.01
Urban land	35	Not rated		Not rated	
31D:					
Greenlee	90	Very limited		Very limited	
		Slope	1.00	Cobble content	1.00
		Cobble content	1.00	Slope	1.00
		Too acid	0.73	Too acid	1.00
31E:					
Greenlee	90	Very limited		Very limited	
		Slope	1.00	Cobble content	1.00
		Cobble content	1.00	Slope	1.00
		Too acid	0.73	Too acid	1.00

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
32A:					
Hatboro	90	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Flooding	1.00
33B:					
Hayesville	90	Somewhat limited		Somewhat limited	
		Low adsorption	0.48	Low adsorption	0.30
		Too acid	0.05	Too acid	0.21
33C:					
Hayesville	90	Somewhat limited		Somewhat limited	
		Low adsorption	0.48	Slope	0.37
		Slope	0.37	Low adsorption	0.30
		Too acid	0.05	Too acid	0.21
33D:					
Hayesville	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Low adsorption	0.48	Low adsorption	0.30
		Too acid	0.05	Too acid	0.21
34B:					
Keener	90	Somewhat limited		Somewhat limited	
		Too acid	0.11	Too acid	0.42
34C:					
Keener	90	Somewhat limited		Somewhat limited	
		Slope	0.37	Too acid	0.42
		Too acid	0.11	Slope	0.37
34D:					
Keener	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.11	Too acid	0.42
35C:					
Keener	90	Somewhat limited		Somewhat limited	
		Large stones content	0.47	Too acid	0.42
		Slope	0.37	Slope	0.37
		Too acid	0.11		
35D:					
Keener	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.47	Too acid	0.42
		Too acid	0.11		
36A:					
Kinkora	90	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	1.00

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
37C:					
Konnarock-----------	90	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	0.95	Droughty	1.00
		Too acid	0.73	Too acid	1.00
37D:					
Konnarock-----------	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Depth to bedrock	0.95	Droughty	1.00
37E:					
Konnarock-----------	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Depth to bedrock	0.95	Droughty	1.00
38C:					
McCamy--------------	85	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Too acid	0.94	Too acid	1.00
		Depth to bedrock	0.80	Droughty	1.00
38D:					
McCamy--------------	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Too acid	0.94	Too acid	1.00
39D:					
McCamy--------------	85	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Slope	1.00	Too acid	1.00
		Too acid	0.94	Droughty	1.00
39E:					
McCamy--------------	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Too acid	0.94	Too acid	1.00
40D:					
Mt Rogers-----------	45	Very limited		Very limited	
		Large stones content	1.00	Too acid	1.00
				Slope	1.00
		Slope	1.00	Droughty	0.29
		Too acid	0.73		
Bloodyhorse---------	25	Very limited		Very limited	
		Large stones content	1.00	Low adsorption	1.00
				Too acid	1.00
		Slope	1.00	Slope	1.00
		Droughty	0.98		
Rock outcrop--------	15	Not rated		Not rated	

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
40F:					
Mt Rogers	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	1.00	Too acid	1.00
				Droughty	0.29
		Too acid	0.73		
Bloodyhorse	25	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
				Too acid	1.00
		Droughty	0.98		
Rock outcrop	15	Not rated		Not rated	
41C:					
Mt Rogers	45	Somewhat limited		Very limited	
		Too acid	0.73	Too acid	1.00
		Large stones content	0.47	Slope	0.37
				Droughty	0.29
		Slope	0.37		
Buzzrock	40	Very limited		Very limited	
		Filtering capacity	1.00	Filtering capacity	1.00
		Droughty	1.00	Low adsorption	1.00
		Too acid	0.73	Droughty	1.00
41D:					
Mt Rogers	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.73	Too acid	1.00
		Large stones content	0.47	Droughty	0.29
Buzzrock	40	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Filtering capacity	1.00		
				Low adsorption	1.00
		Droughty	1.00	Slope	1.00
42C:					
Peaks	90	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Filtering capacity	0.99	Droughty	1.00
				Filtering capacity	0.99
		Too acid	0.37		
42D:					
Peaks	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Filtering capacity	0.99	Droughty	1.00

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
42E:					
Peaks	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Filtering capacity	0.99	Droughty	1.00
43C:					
Peaks	90	Very limited		Very limited	
		Large stones content	1.00	Low adsorption	1.00
		Droughty	1.00	Droughty	1.00
		Filtering capacity	0.99	Filtering capacity	0.99
43D:					
Peaks	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
		Droughty	1.00	Droughty	1.00
43E:					
Peaks	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
		Droughty	1.00	Droughty	1.00
43F:					
Peaks	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
		Droughty	1.00	Droughty	1.00
44C:					
Pigeonroost	85	Somewhat limited		Very limited	
		Too acid	0.37	Low adsorption	1.00
		Slope	0.37	Too acid	0.96
		Droughty	0.14	Slope	0.37
44D:					
Pigeonroost	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.37	Slope	1.00
		Droughty	0.14	Too acid	0.96
44E:					
Pigeonroost	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.37	Slope	1.00
		Droughty	0.14	Too acid	0.96
45D:					
Pigeonroost	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	0.53	Slope	1.00
		Too acid	0.37	Too acid	0.96

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
45E:					
Pigeonroost	85	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Large stones content	0.53	Slope	1.00
		Too acid	0.37	Too acid	0.96
46E:					
Pigeonroost	60	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Too acid	0.37	Slope	1.00
		Droughty	0.14	Too acid	0.96
Rock outcrop	30	Not rated		Not rated	
47D:					
Pineola	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.77	Slope	1.00
		Depth to bedrock	0.54	Too acid	0.91
48E:					
Pineola	90	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	0.77	Slope	1.00
		Depth to bedrock	0.54	Too acid	0.91
49:					
Pits, quarries	100	Not rated		Not rated	
50F:					
Rock outcrop	50	Not rated		Not rated	
Peaks	40	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Filtering capacity	0.99	Droughty	1.00
51B:					
Scales	95	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Low adsorption	1.00
		Dense layer	1.00	Slow water movement	1.00
52C:					
Sylco	50	Very limited		Very limited	
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	0.71	Droughty	1.00
		Too acid	0.37	Too acid	0.96
Sylvatus	35	Very limited		Very limited	
		Droughty	1.00	Droughty	1.00
		Depth to bedrock	1.00	Low adsorption	1.00
		Too acid	0.73	Too acid	1.00

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
52D:					
Sylco	50	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Depth to bedrock	0.71	Droughty	1.00
Sylvatus	35	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	1.00	Slope	1.00
52E:					
Sylco	50	Very limited		Very limited	
		Slope	1.00	Low adsorption	1.00
		Droughty	1.00	Slope	1.00
		Depth to bedrock	0.71	Droughty	1.00
Sylvatus	35	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Depth to bedrock	1.00	Slope	1.00
53B:					
Tate	90	Somewhat limited		Somewhat limited	
		Too acid	0.11	Too acid	0.42
53C:					
Tate	90	Somewhat limited		Somewhat limited	
		Slope	0.37	Too acid	0.42
		Too acid	0.11	Slope	0.37
53D:					
Tate	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.11	Too acid	0.42
53E:					
Tate	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.11	Too acid	0.42
54C:					
Tate	90	Somewhat limited		Somewhat limited	
		Slope	0.37	Too acid	0.42
		Too acid	0.11	Slope	0.37
54D:					
Tate	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.11	Too acid	0.42
54E:					
Tate	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.11	Too acid	0.42

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste: Rating class and limiting features	Value	Application of sewage sludge: Rating class and limiting features	Value
55D:					
Tate	90	Very limited		Very limited	
		Large stones content	1.00	Slope	1.00
		Slope	1.00	Too acid	0.42
		Too acid	0.11		
56C:					
Thunder	80	Somewhat limited		Somewhat limited	
		Too acid	0.37	Too acid	0.96
		Slope	0.37	Slope	0.37
		Cobble content	0.12	Cobble content	0.12
56D:					
Thunder	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.37	Too acid	0.96
		Cobble content	0.12	Cobble content	0.12
56E:					
Thunder	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Too acid	0.37	Too acid	0.96
		Cobble content	0.12	Cobble content	0.12
57C:					
Thunder	80	Somewhat limited		Somewhat limited	
		Large stones content	0.47	Too acid	0.96
		Too acid	0.37	Slope	0.37
		Slope	0.37	Cobble content	0.12
57D:					
Thunder	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.47	Too acid	0.96
		Too acid	0.37	Cobble content	0.12
57E:					
Thunder	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Large stones content	0.47	Too acid	0.96
		Too acid	0.37	Cobble content	0.12
58D:					
Udorthents	50	Not rated		Not rated	
Urban land	35	Not rated		Not rated	
59D:					
Unicoi	85	Very limited		Very limited	
		Droughty	1.00	Droughty	1.00
		Large stones content	1.00	Low adsorption	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Application of manure and food-processing waste		Application of sewage sludge	
		Rating class and limiting features	Value	Rating class and limiting features	Value
59E:					
Unicoi	85	Very limited		Very limited	
		Slope	1.00	Droughty	1.00
		Droughty	1.00	Low adsorption	1.00
		Large stones content	1.00	Slope	1.00
W:					
Water	100	Not rated		Not rated	

Table 7.—Agricultural Waste Management, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
1C:					
Balsam	85	Very limited		Very limited	
		Cobble content	1.00	Seepage	1.00
		Too acid	1.00	Cobble content	1.00
		Too steep for surface application	1.00	Too acid	1.00
1D:					
Balsam	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Cobble content	1.00	Cobble content	1.00
1E:					
Balsam	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Cobble content	1.00	Cobble content	1.00
2D:					
Balsam	70	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Cobble content	1.00	Cobble content	1.00
Nopan	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
2E:					
Balsam	70	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Cobble content	1.00	Cobble contnet	1.00
Nopan	20	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
3D:					
Bloodyhorse	80	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
4F:					
Bloodyhorse	80	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	1.00	Depth to bedrock	1.00
5B:					
Braddock	90	Somewhat limited		Very limited	
		Too steep for surface application	0.32	Seepage	1.00
		Too acid	0.07	Too acid	0.07
5C:					
Braddock	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
		Too acid	0.07	Too acid	0.07

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
5D:					
Braddock------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.07	Too acid	0.07
6E:					
Braddock------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Cobble content	0.40	Too acid	0.07
7D:					
Brevard-------------	50	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91
Greenlee------------	35	Very limited		Very limited	
		Cobble content	1.00	Seepage	1.00
		Too steep for surface application	1.00	Cobble content	1.00
		Too acid	1.00	Too steep for surface application	1.00
8C:					
Burton--------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Depth to bedrock	1.00
		Depth to bedrock	0.80	Too acid	1.00
9D:					
Burton--------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	1.00	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
9E:					
Burton	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	1.00	Depth to bedrock	1.00
10D:					
Peaks	20	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
Chestnut	65	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
		Too acid	0.99	Too steep for surface application	1.00
10E:					
Chestnut	65	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.99	Depth to bedrock	1.00
Peaks	20	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
11F:					
Chestnut	40	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.99	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
11F:					
Peaks	25	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
Tuckasegee	20	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.21	Too acid	0.21
12A:					
Codorus	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Depth to saturated zone	1.00
		Too acid	0.21	Seepage	1.00
13A:					
Comus	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Too acid	0.91	Seepage	1.00
				Too acid	0.91
14C:					
Cowee	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.96	Depth to bedrock	1.00
		Too steep for sprinkler application	0.60	Too acid	0.96
14D:					
Cowee	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
14E:					
Cowee---------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Depth to bedrock	1.00
15D:					
Cowee---------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96		
15E:					
Cowee---------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Depth to bedrock	1.00
16D:					
Cowee---------------	60	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96		
Rock outcrop--------	35	Not rated		Not rated	
16E:					
Cowee---------------	60	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Depth to bedrock	1.00
Rock outcrop--------	35	Not rated		Not rated	

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
17A:					
Craigsville---------	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Filtering capacity	0.99	Seepage	1.00
				Cobble content	1.00
		Too acid	0.96		
18C:					
Cullasaja-----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Cobble content	1.00
				Too acid	1.00
		Too acid	1.00		
		Cobble content	0.87		
18D:					
Cullasaja-----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Too steep for surface application	1.00
		Too steep for sprinkler application	1.00		
				Cobble content	1.00
		Too acid	1.00		
19A:					
Delanco-------------	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	1.00	Seepage	1.00
		Slow water movement	0.37	Too acid	1.00
19B:					
Delanco-------------	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too acid	1.00	Seepage	1.00
		Slow water movement	0.37	Too acid	1.00
20C:					
Delanco-------------	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too steep for surface application	1.00	Seepage	1.00
				Too acid	1.00
		Too acid	1.00		
21B:					
Edneytown-----------	90	Somewhat limited		Very limited	
		Too acid	0.96	Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.96

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
21C:					
Edneytown-----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Too acid	0.96
				Too steep for surface application	0.94
		Too acid	0.96		
		Too steep for sprinkler application	0.60		
21D:					
Edneytown-----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	0.96
		Too acid	0.96		
21E:					
Edneytown-----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	0.96
		Too acid	0.96		
21F:					
Edneytown-----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	0.96
		Too acid	0.96		
22C:					
Edneytown-----------	60	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Too acid	0.96
				Too steep for surface application	0.22
		Too acid	0.96		
		Too steep for sprinkler application	0.10		
Urban land----------	35	Not rated		Not rated	

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
23C:					
Edneyville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.91	Too steep for surface application	0.94
		Too steep for sprinkler application	0.60	Too acid	0.91
23D:					
Edneyville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91
23E:					
Edneyville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91
24D:					
Edneyville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91
24E:					
Edneyville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91
24F:					
Edneyville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Too acid	0.91

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
25B:					
Elsinboro	90	Somewhat limited		Very limited	
		Too acid	0.96	Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.96
				Flooding	0.40
26B:					
Elsinboro	60	Somewhat limited		Very limited	
		Too acid	0.96	Seepage	1.00
		Too steep for surface application	0.08	Too acid	0.96
				Flooding	0.40
Urban land	35	Not rated		Not rated	
27D:					
Evard	50	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.99	Too acid	0.99
Cowee	35	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Depth to bedrock	1.00
28B:					
Glenelg	90	Somewhat limited		Very limited	
		Too steep for surface application	0.32	Seepage	1.00
		Too acid	0.07	Too acid	0.07
28C:					
Glenelg	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
		Too acid	0.07	Too acid	0.07

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
28D:					
Glenelg-------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.07	Too acid	0.07
28E:					
Glenelg-------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.07	Too acid	0.07
28F:					
Glenelg-------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.07	Too acid	0.07
29C:					
Glenelg-------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
		Too acid	0.07	Too acid	0.07
29D:					
Glenelg-------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.07	Too acid	0.07
29E:					
Glenelg-------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	0.07	Too acid	0.07

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
30C:					
Glenelg-------------	60	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.10	Too steep for surface application	0.22
		Too acid	0.07	Too acid	0.07
Urban land----------	35	Not rated		Not rated	
31D:					
Greenlee------------	90	Very limited		Very limited	
		Cobble content	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Cobble content	1.00
31E:					
Greenlee------------	90	Very limited		Very limited	
		Cobble content	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Cobble content	1.00
32A:					
Hatboro-------------	90	Very limited		Very limited	
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Ponding	1.00
		Flooding	1.00	Depth to saturated zone	1.00
33B:					
Hayesville----------	90	Somewhat limited		Very limited	
		Low adsorption	0.48	Seepage	1.00
		Too steep for surface application	0.32	Low adsorption	0.48
		Too acid	0.21	Too acid	0.21
33C:					
Hayesville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
		Low adsorption	0.48	Low adsorption	0.48

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
33D:					
Hayesville----------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Low adsorption	0.48	Low adsorption	0.48
34B:					
Keener--------------	90	Somewhat limited		Very limited	
		Too acid	0.42	Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.42
34C:					
Keener--------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
		Too acid	0.42	Too acid	0.42
34D:					
Keener--------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.42	Too acid	0.42
35C:					
Keener--------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
		Too acid	0.42	Too acid	0.42
35D:					
Keener--------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
					1.00
		Too acid	0.42	Too acid	0.42

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
36A:					
Kinkora	90	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Depth to	1.00	Depth to	1.00
		saturated zone		saturated zone	
		Slow water	1.00	Seepage	1.00
		movement			
37C:					
Konnarock	90	Very limited		Very limited	
		Too steep for	1.00	Seepage	1.00
		surface		Depth to bedrock	1.00
		application		Too acid	1.00
		Droughty	1.00		
		Too acid	1.00		
37D:					
Konnarock	90	Very limited		Very limited	
		Too steep for	1.00	Seepage	1.00
		surface		Too steep for	1.00
		application		surface	
		Too steep for	1.00	application	
		sprinkler		Depth to bedrock	1.00
		application			
		Droughty	1.00		
37E:					
Konnarock	90	Very limited		Very limited	
		Too steep for	1.00	Seepage	1.00
		surface		Too steep for	1.00
		application		surface	
		Too steep for	1.00	application	
		sprinkler		Depth to bedrock	1.00
		application			
		Droughty	1.00		
38C:					
McCamy	85	Very limited		Very limited	
		Too steep for	1.00	Seepage	1.00
		surface		Depth to bedrock	1.00
		application		Too acid	1.00
		Too acid	1.00		
		Droughty	1.00		
38D:					
McCamy	85	Very limited		Very limited	
		Too steep for	1.00	Too steep for	1.00
		surface		surface	
		application		application	
		Too steep for	1.00	Seepage	1.00
		sprinkler		Depth to bedrock	1.00
		application			
		Too acid	1.00		

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
39D:					
McCamy	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Depth to bedrock	1.00
		Droughty	1.00	Too acid	1.00
39E:					
McCamy	85	Very limited		Very limited	
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
		Too acid	1.00	Depth to bedrock	1.00
40D:					
Mt Rogers	45	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
Bloodyhorse	25	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
Rock outcrop	15	Not rated		Not rated	
40F:					
Mt Rogers	45	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	1.00	Too acid	1.00
Bloodyhorse	25	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	1.00	Depth to bedrock	1.00
Rock outcrop	15	Not rated		Not rated	

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
41C:					
Mt Rogers-----------	45	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	1.00	Too acid	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
Buzzrock------------	40	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too acid	1.00
		Droughty	1.00	Depth to bedrock	0.96
41D:					
Mt Rogers-----------	45	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	1.00	Too acid	1.00
Buzzrock------------	40	Very limited		Very limited	
		Filtering capacity	1.00	Seepage	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Too acid	1.00
42C:					
Peaks---------------	90	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Filtering capacity	0.99	Too acid	0.96
42D:					
Peaks---------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
42E:					
Peaks---------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
43C:					
Peaks---------------	90	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Filtering capacity	0.99	Too acid	0.96
43D:					
Peaks---------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
43E:					
Peaks---------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
43F:					
Peaks---------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
44C:					
Pigeonroost---------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too acid	0.96	Depth to bedrock	1.00
		Too steep for sprinkler application	0.60	Too acid	0.96

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
44D:					
Pigeonroost----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Depth to bedrock	1.00
44E:					
Pigeonroost----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Depth to bedrock	1.00
45D:					
Pigeonroost----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Depth to bedrock	1.00
		Too acid	0.96	Too steep for surface application	1.00
45E:					
Pigeonroost----------	85	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Depth to bedrock	1.00
46E:					
Pigeonroost----------	60	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.96	Depth to bedrock	1.00
Rock outcrop---------	30	Not rated		Not rated	

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
47D:					
Pineola	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Depth to bedrock	1.00
48E:					
Pineola	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.91	Depth to bedrock	1.00
49:					
Pits, quarries	100	Not rated		Not rated	
50F:					
Rock outcrop	50	Not rated		Not rated	
Peaks	40	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
51B:					
Scales	95	Very limited		Very limited	
		Depth to saturated zone	1.00	Seepage	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Too acid	0.96	Too acid	0.96
52C:					
Sylco	50	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Droughty	1.00	Depth to bedrock	1.00
		Too acid	0.96	Too acid	0.96
Sylvatus	35	Very limited		Very limited	
		Droughty	1.00	Depth to bedrock	1.00
		Too acid	1.00	Seepage	1.00
		Depth to bedrock	1.00	Too acid	1.00

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
52D:					
Sylco	50	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
Sylvatus	35	Very limited		Very limited	
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
52E:					
Sylco	50	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Droughty	1.00	Depth to bedrock	1.00
Sylvatus	35	Very limited		Very limited	
		Droughty	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Seepage	1.00
53B:					
Tate	90	Somewhat limited		Very limited	
		Too acid	0.42	Seepage	1.00
		Too steep for surface application	0.32	Too acid	0.42
53C:					
Tate	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
		Too acid	0.42	Too acid	0.42

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
53D:					
Tate----------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.42	Too acid	0.42
53E:					
Tate----------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.42	Too acid	0.42
54C:					
Tate----------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	0.60	Too steep for surface application	0.94
		Too acid	0.42	Too acid	0.42
54D:					
Tate----------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.42	Too acid	0.42
54E:					
Tate----------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.42	Too acid	0.42
55D:					
Tate----------------	90	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
		Too acid	0.42	Too acid	0.42

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation: Rating class and limiting features	Value	Overland flow of wastewater: Rating class and limiting features	Value
56C:					
Thunder-------------	80	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Cobble content	1.00
		Too acid	0.96	Too acid	0.96
		Too steep for sprinkler application	0.60		
56D:					
Thunder-------------	80	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Cobble content	1.00
		Too acid	0.96		
56E:					
Thunder-------------	80	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Cobble content	1.00
		Too acid	0.96		
57C:					
Thunder-------------	80	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Cobble content	1.00
		Too acid	0.96	Too acid	0.96
		Too steep for sprinkler application	0.60		
57D:					
Thunder-------------	80	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Cobble content	1.00
		Too acid	0.96		
57E:					
Thunder-------------	80	Very limited		Very limited	
		Too steep for surface application	1.00	Seepage	1.00
				Too steep for surface application	1.00
		Too steep for sprinkler application	1.00	Cobble content	1.00
		Too acid	0.96		

Table 7.—Agricultural Waste Management, Part II

Map symbol and soil name	Pct. of map unit	Disposal of wastewater by irrigation		Overland flow of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
58D:					
Udorthents----------	50	Not rated		Not rated	
Urban land----------	35	Not rated		Not rated	
59D:					
Unicoi--------------	85	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too steep for surface application	1.00	Too acid	1.00
59E:					
Unicoi--------------	85	Very limited		Very limited	
		Droughty	1.00	Seepage	1.00
		Too steep for surface application	1.00	Depth to bedrock	1.00
		Too steep for sprinkler application	1.00	Too steep for surface application	1.00
W:					
Water---------------	100	Not rated		Not rated	

Table 7.—Agricultural Waste Management, Part III

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
1C:					
Balsam	85	Very limited		Very limited	
		Cobble content	1.00	Cobble content	1.00
		Slope	1.00	Too acid	1.00
		Slow water movement	0.32	Too steep for surface application	1.00
1D:					
Balsam	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Cobble content	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Cobble content	1.00
1E:					
Balsam	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Cobble content	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Cobble content	1.00
2D:					
Balsam	70	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Cobble content	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Cobble content	1.00
Nopan	20	Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to saturated zone	1.00	Too steep for sprinkler irrigation	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
2E:					
Balsam	70	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Cobble content	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Cobble content	1.00
Nopan	20	Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Depth to saturated zone	1.00	Too steep for sprinkler irrigation	1.00
3D:					
Bloodyhorse	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too acid	1.00
4F:					
Bloodyhorse	80	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
5B:					
Braddock	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Too steep for surface application	0.32
		Slope	0.12	Too acid	0.07
5C:					
Braddock	90	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.94
				Too acid	0.07

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
5D:					
Braddock	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.07
6E:					
Braddock	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Cobble content	0.40
7D:					
Brevard	50	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.91
Greenlee	35	Very limited		Very limited	
		Slope	1.00	Cobble content	1.00
		Cobble content	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00
8C:					
Burton	90	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.78	Too acid	1.00
9D:					
Burton	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.78	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
9E:					
Burton	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.78	Depth to bedrock	1.00
10D:					
Peaks	20	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Too acid	0.03	Too steep for sprinkler irrigation	1.00
Chestnut	65	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00
10E:					
Chestnut	65	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
Peaks	20	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Depth to bedrock	1.00
11F:					
Chestnut	40	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
11F:					
Peaks	25	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Depth to bedrock	1.00
Tuckasegee	20	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00
				Too acid	0.21
12A:					
Codorus	90	Very limited		Very limited	
		Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	1.00
		Slow water movement	1.00	Too acid	0.21
13A:					
Comus	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Slow water movement	1.00	Too acid	0.91
14C:					
Cowee	90	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	0.96
14D:					
Cowee	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
14E:					
Cowee	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
15D:					
Cowee	90	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	1.00
15E:					
Cowee	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
16D:					
Cowee	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	1.00
Rock outcrop	35	Not rated		Not rated	
16E:					
Cowee	60	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
Rock outcrop	35	Not rated		Not rated	
17A:					
Craigsville	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Cobble content	1.00	Filtering capacity	0.99
		Too acid	0.03	Too acid	0.96
18C:					
Cullasaja	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Cobble content	1.00	Too acid	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	0.94

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
18D:					
Cullasaja	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Cobble content	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Too acid	1.00
19A:					
Delanco	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too acid	1.00
		Too acid	0.14	Slow water movement	0.26
19B:					
Delanco	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too acid	1.00
		Too acid	0.14	Too steep for surface application	0.32
20C:					
Delanco	90	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	1.00
21B:					
Edneytown	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.96
		Too acid	0.14	Too steep for surface application	0.32
		Slope	0.12		
21C:					
Edneytown	90	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	0.96
		Too acid	0.14	Too steep for sprinkler irrigation	0.94

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
21D:					
Edneytown----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00		
		Too acid	0.14	Too steep for sprinkler irrigation	1.00
				Too acid	0.96
21E:					
Edneytown----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00		
		Too acid	0.14	Too steep for sprinkler irrigation	1.00
				Too acid	0.96
21F:					
Edneytown----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00		
		Too acid	0.14	Too steep for sprinkler irrigation	1.00
				Too acid	0.96
22C:					
Edneytown----------	60	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00		
		Too acid	0.14	Too acid	0.96
				Too steep for sprinkler irrigation	0.22
Urban land---------	35	Not rated		Not rated	
23C:					
Edneyville---------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32		
		Too acid	0.03	Too steep for sprinkler irrigation	0.94
				Too acid	0.91
23D:					
Edneyville---------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32		
		Too acid	0.03	Too steep for sprinkler irrigation	1.00
				Too acid	0.91

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
23E:					
Edneyville----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32		
		Too acid	0.03	Too steep for sprinkler irrigation	1.00
				Too acid	0.91
24D:					
Edneyville----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32		
		Too acid	0.03	Too steep for sprinkler irrigation	1.00
				Too acid	0.91
24E:					
Edneyville----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32		
		Too acid	0.03	Too steep for sprinkler irrigation	1.00
				Too acid	0.91
24F:					
Edneyville----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32		
		Too acid	0.03	Too steep for sprinkler irrigation	1.00
				Too acid	0.91
25B:					
Elsinboro-----------	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.96
				Too steep for surface application	0.32
		Slope	0.12		
26B:					
Elsinboro-----------	60	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.96
				Too steep for surface application	0.08
Urban land----------	35	Not rated		Not rated	

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
27D:					
Evard	50	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.99
Cowee	35	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
28B:					
Glenelg	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Too steep for surface application	0.32
		Slope	0.12	Too acid	0.07
28C:					
Glenelg	90	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.94
				Too acid	0.07
28D:					
Glenelg	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.07
28E:					
Glenelg	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.07

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
28F:					
Glenelg-------------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.07
29C:					
Glenelg-------------	90	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.94
				Too acid	0.07
29D:					
Glenelg-------------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.07
29E:					
Glenelg-------------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.07
30C:					
Glenelg-------------	60	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.22
				Too acid	0.07
Urban land----------	35	Not rated		Not rated	
31D:					
Greenlee------------	90	Very limited		Very limited	
		Slope	1.00	Cobble content	1.00
		Cobble content	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
31E:					
Greenlee------------	90	Very limited		Very limited	
		Slope	1.00	Cobble content	1.00
		Cobble content	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00
32A:					
Hatboro-------------	90	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Flooding	1.00
33B:					
Hayesville----------	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Low adsorption	0.48
		Slope	0.12	Too steep for surface application	0.32
				Too acid	0.21
33C:					
Hayesville----------	90	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.94
				Low adsorption	0.48
33D:					
Hayesville----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Low adsorption	0.48
34B:					
Keener--------------	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.42
		Slope	0.12	Too steep for surface application	0.32
		Too acid	0.03		
34C:					
Keener--------------	90	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.94
		Too acid	0.03	Too acid	0.42

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
34D:					
Keener	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Too acid	0.42
35C:					
Keener	90	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.94
		Too acid	0.03	Too acid	0.42
35D:					
Keener	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Too acid	0.42
36A:					
Kinkora	90	Very limited		Very limited	
		Ponding	1.00	Ponding	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	0.96
37C:					
Konnarock	90	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too acid	1.00
37D:					
Konnarock	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
37E:					
Konnarock-----------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
38C:					
McCamy--------------	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.61	Too acid	1.00
38D:					
McCamy--------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.61	Depth to bedrock	1.00
39D:					
McCamy--------------	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.61	Too acid	1.00
39E:					
McCamy--------------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.61	Depth to bedrock	1.00
40D:					
Mt Rogers-----------	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Cobble content	0.99	Too acid	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
40D:					
Bloodyhorse	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.32	Too acid	1.00
Rock outcrop	15	Not rated		Not rated	
40F:					
Mt Rogers	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Cobble content	0.99	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Too acid	1.00
Bloodyhorse	25	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Depth to bedrock	1.00
Rock outcrop	15	Not rated		Not rated	
41C:					
Mt Rogers	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Cobble content	0.99	Too acid	1.00
		Slow water movement	0.32	Too steep for sprinkler irrigation	0.94
Buzzrock	40	Very limited		Very limited	
		Depth to bedrock	1.00	Filtering capacity	1.00
		Slope	1.00	Too steep for surface application	1.00
		Cobble content	0.95	Too acid	1.00
41D:					
Mt Rogers	45	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Cobble content	0.99	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.32	Too acid	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
41D:					
Buzzrock	40	Very limited		Very limited	
		Slope	1.00	Filtering capacity	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Cobble content	0.95	Too steep for sprinkler irrigation	1.00
42C:					
Peaks	90	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Too steep for surface application	1.00
		Too acid	0.03	Filtering capacity	0.99
42D:					
Peaks	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Depth to bedrock	1.00
42E:					
Peaks	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Depth to bedrock	1.00
43C:					
Peaks	90	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Too steep for surface application	1.00
		Too acid	0.03	Filtering capacity	0.99
43D:					
Peaks	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
43E:					
Peaks---------------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Depth to bedrock	1.00
43F:					
Peaks---------------	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Depth to bedrock	1.00
44C:					
Pigeonroost---------	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too acid	0.96
44D:					
Pigeonroost---------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
44E:					
Pigeonroost---------	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
45D:					
Pigeonroost---------	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
45E:					
Pigeonroost	85	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
46E:					
Pigeonroost	60	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
Rock outcrop	30	Not rated		Not rated	
47D:					
Pineola	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
48E:					
Pineola	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	1.00	Depth to bedrock	1.00
49:					
Pits, quarries	100	Not rated		Not rated	
50F:					
Rock outcrop	50	Not rated		Not rated	
Peaks	40	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Too acid	0.03	Depth to bedrock	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
51B:					
Scales	95	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Slow water movement	0.99
		Too acid	0.14	Too acid	0.96
52C:					
Sylco	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	0.78	Too acid	0.96
Sylvatus	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slow water movement	1.00	Too acid	1.00
		Slope	1.00	Too steep for surface application	1.00
52D:					
Sylco	50	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.78	Depth to bedrock	1.00
Sylvatus	35	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
52E:					
Sylco	50	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Depth to bedrock	1.00	Too steep for sprinkler irrigation	1.00
		Slow water movement	0.78	Depth to bedrock	1.00
Sylvatus	35	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
53B:					
Tate	90	Very limited		Somewhat limited	
		Slow water movement	1.00	Too acid	0.42
		Slope	0.12	Too steep for surface application	0.32
53C:					
Tate	90	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.94
				Too acid	0.42
53D:					
Tate	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.42
53E:					
Tate	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.42
54C:					
Tate	90	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	0.94
				Too acid	0.42
54D:					
Tate	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.42

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater		Slow rate treatment of wastewater	
		Rating class and limiting features	Value	Rating class and limiting features	Value
54E:					
Tate	90	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.42
55D:					
Tate	90	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Slope	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.42
56C:					
Thunder	80	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Cobble content	1.00	Too acid	0.96
		Slope	1.00	Too steep for sprinkler irrigation	0.94
56D:					
Thunder	80	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Cobble content	1.00	Too acid	0.96
56E:					
Thunder	80	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00	Too steep for sprinkler irrigation	1.00
		Cobble content	1.00	Too acid	0.96
57C:					
Thunder	80	Very limited		Very limited	
		Slow water movement	1.00	Too steep for surface application	1.00
		Cobble content	1.00	Too acid	0.96
		Slope	1.00	Too steep for sprinkler irrigation	0.94

Table 7.—Agricultural Waste Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Rapid infiltration of wastewater: Rating class and limiting features	Value	Slow rate treatment of wastewater: Rating class and limiting features	Value
57D:					
Thunder	80	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00		
		Cobble content	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.96
57E:					
Thunder	80	Very limited		Very limited	
		Slope	1.00	Too steep for surface application	1.00
		Slow water movement	1.00		
		Cobble content	1.00	Too steep for sprinkler irrigation	1.00
				Too acid	0.96
58D:					
Udorthents	50	Not rated		Not rated	
Urban land	35	Not rated		Not rated	
59D:					
Unicoi	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Too steep for surface application	1.00
		Too acid	0.77		
				Too acid	1.00
59E:					
Unicoi	85	Very limited		Very limited	
		Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Too steep for surface application	1.00
		Too acid	0.77		
				Too steep for sprinkler irrigation	1.00
W:					
Water	100	Not rated		Not rated	

Table 8.—Forestland Productivity

(Absence of an entry indicates information was not available)

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
1C:				
Balsam	Fraser fir	---	---	Fraser fir, red spruce
	northern red oak	---	---	
	red spruce	64	105	
	sugar maple	---	---	
	yellow birch	---	---	
1D:				
Balsam	Fraser fir	---	---	Fraser fir, red spruce
	northern red oak	---	---	
	red spruce	64	105	
	sugar maple	---	---	
	yellow birch	---	---	
1E:				
Balsam	Fraser fir	---	---	Fraser fir, red spruce
	northern red oak	---	---	
	red spruce	64	105	
	sugar maple	---	---	
	yellow birch	---	---	
2D:				
Balsam	Fraser fir	---	---	Fraser fir, red spruce
	northern red oak	---	---	
	red spruce	64	105	
	sugar maple	---	---	
	yellow birch	---	---	
Nopan	Fraser fir	---	---	black ash, spruce
	northern red oak	---	---	
	red spruce	58	93	
	sugar maple	---	---	
	yellow birch	---	---	
2E:				
Balsam	Fraser fir	---	---	Fraser fir, red spruce
	northern red oak	---	---	
	red spruce	64	105	
	sugar maple	---	---	
	yellow birch	---	---	
Nopan	Fraser fir	---	---	black ash, spruce
	northern red oak	---	---	
	red spruce	58	93	
	sugar maple	---	---	
	yellow birch	---	---	
3D:				
Bloodyhorse	Fraser fir	---	---	Fraser fir, red spruce
	red spruce	53	79	
4F:				
Bloodyhorse	Fraser fir	---	---	Fraser fir, red spruce
	red spruce	53	79	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
5B:				
Braddock	eastern white pine	95	172	eastern white pine, northern red oak, yellow-poplar
	northern red oak	80	57	
	yellow-poplar	90	86	
5C:				
Braddock	eastern white pine	95	172	eastern white pine, northern red oak, yellow-poplar
	northern red oak	80	57	
	yellow-poplar	90	86	
5D:				
Braddock	eastern white pine	95	172	eastern white pine, northern red oak, yellow-poplar
	northern red oak	80	57	
	yellow-poplar	90	86	
6E:				
Braddock	eastern white pine	95	172	eastern white pine, northern red oak, yellow-poplar
	northern red oak	80	57	
	yellow-poplar	90	86	
7D:				
Brevard	eastern white pine	90	172	black walnut, eastern white pine, northern red oak, shortleaf pine, yellow-poplar
	hemlock	---	---	
	northern red oak	75	57	
	red maple	---	---	
	shortleaf pine	70	114	
	Virginia pine	80	114	
	white oak	---	---	
	yellow-poplar	95	100	
Greenlee	black locust	---	---	eastern white pine, northern red oak, yellow-poplar
	eastern hemlock	---	---	
	eastern white pine	83	157	
	pitch pine	63	---	
	red maple	---	---	
	scarlet oak	55	43	
	Virginia pine	69	114	
	white oak	---	---	
	yellow-poplar	110	129	
8C:				
Burton	American beech	---	---	Fraser fir, red spruce
	Fraser fir	---	---	
	red spruce	59	95	
	sugar maple	---	---	
	yellow birch	---	---	
9D:				
Burton	American beech	---	---	Fraser fir, red spruce
	Fraser fir	---	---	
	red spruce	59	95	
	sugar maple	---	---	
	yellow birch	---	---	
9E:				
Burton	American beech	---	---	Fraser fir, red spruce
	Fraser fir	---	---	
	red spruce	59	95	
	sugar maple	---	---	
	yellow birch	---	---	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
10D:				
Peaks	eastern white pine	81	146	eastern white pine, yellow-poplar
	Virginia pine	62	95	
	chestnut oak	70	52	
Chestnut	eastern white pine	78	139	eastern white pine, yellow-poplar
	yellow-poplar	97	102	
	northern red oak	80	62	
	scarlet oak	68	50	
	chestnut oak	69	51	
	black oak	71	53	
	white oak	70	52	
	pitch pine	---	---	
	shortleaf pine	---	---	
10E:				
Chestnut	eastern white pine	78	139	eastern white pine, yellow-poplar
	yellow-poplar	97	102	
	northern red oak	80	62	
	scarlet oak	68	50	
	chestnut oak	69	51	
	black oak	71	53	
	white oak	70	52	
	white oak	70	52	
	pitch pine	---	---	
	shortleaf pine	---	---	
Peaks	eastern white pine	81	146	eastern white pine, yellow-poplar
	Virginia pine	62	95	
	chestnut oak	70	52	
11F:				
Chestnut	eastern white pine	78	139	eastern white pine, yellow-poplar
	yellow-poplar	97	102	
	northern red oak	80	62	
	scarlet oak	68	50	
	chestnut oak	69	51	
	black oak	71	53	
	white oak	70	52	
	white oak	70	52	
	pitch pine	---	---	
	shortleaf pine	---	---	
Peaks	eastern white pine	81	146	eastern white pine, yellow-poplar
	Virginia pine	62	95	
	chestnut oak	70	52	
Tuckasegee	yellow-poplar	109	114	black cherry, eastern white pine, northern red oak, yellow-poplar
	eastern white pine	98	172	
	northern red oak	92	74	
	hickory	---	---	
	black cherry	---	---	
	white oak	---	---	
	eastern hemlock	---	---	
	black locust	---	---	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
12A:				
Codorus	black walnut	100	78	black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	northern red oak	90	70	
	sugar maple	90	70	
	white ash	90	70	
	yellow-poplar	100	107	
13A:				
Comus	eastern white pine	105	200	black walnut, eastern white pine, yellow-poplar
	northern red oak	85	66	
	yellow-poplar	110	123	
14C:				
Cowee	chestnut oak	55	40	eastern white pine, yellow-poplar
	eastern white pine	90	166	
	scarlet oak	54	60	
	Virginia pine	63	97	
	yellow-poplar	85	80	
14D:				
Cowee	chestnut oak	55	40	eastern white pine, yellow-poplar
	eastern white pine	90	166	
	scarlet oak	54	60	
	Virginia pine	63	97	
	yellow-poplar	85	80	
14E:				
Cowee	chestnut oak	55	40	eastern white pine, yellow-poplar
	eastern white pine	90	166	
	scarlet oak	54	60	
	Virginia pine	63	97	
	yellow-poplar	85	80	
15D:				
Cowee	chestnut oak	55	40	eastern white pine, yellow-poplar
	eastern white pine	90	166	
	scarlet oak	54	60	
	Virginia pine	63	97	
	yellow-poplar	85	80	
15E:				
Cowee	chestnut oak	55	40	eastern white pine, yellow-poplar
	eastern white pine	90	166	
	scarlet oak	54	60	
	Virginia pine	63	97	
	yellow-poplar	85	80	
16D:				
Cowee	chestnut oak	55	40	eastern white pine, yellow-poplar
	eastern white pine	90	166	
	scarlet oak	54	60	
	Virginia pine	63	97	
	yellow-poplar	85	80	
Rock outcrop.				

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
16E:				
Cowee	chestnut oak	55	40	eastern white pine, yellow-poplar
	eastern white pine	90	166	
	scarlet oak	54	60	
	Virginia pine	63	97	
	yellow-poplar	85	80	
Rock outcrop.				
17A:				
Craigsville	eastern white pine	90	166	eastern white pine, yellow-poplar
	northern red oak	80	62	
	Virginia pine	80	120	
	yellow-poplar	95	97	
18C:				
Cullasaja	yellow-poplar	103	111	yellow-poplar, eastern white pine, northern red oak
	eastern white pine	90	166	
	northern red oak	80	62	
18D:				
Cullasaja	yellow-poplar	103	111	yellow-poplar, eastern white pine, northern red oak
	eastern white pine	90	166	
	northern red oak	80	62	
19A:				
Delanco	black oak	80	62	eastern white pine, yellow-poplar
	eastern white pine	95	175	
	yellow-poplar	90	91	
19B:				
Delanco	black oak	80	62	eastern white pine, yellow-poplar
	eastern white pine	95	175	
	yellow-poplar	90	91	
20C:				
Delanco	black oak	80	62	eastern white pine, yellow-poplar
	eastern white pine	95	175	
	yellow-poplar	90	91	
21B:				
Edneytown	eastern white pine	115	220	eastern white pine, yellow-poplar
	hickory	58	37	
	Virginia pine	70	109	
	white oak	60	44	
	yellow-poplar	120	149	
21C:				
Edneytown	eastern white pine	115	220	eastern white pine, yellow-poplar
	hickory	58	37	
	Virginia pine	70	109	
	white oak	60	44	
	yellow-poplar	120	149	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
21D:				
Edneytown	eastern white pine	115	220	eastern white pine, yellow-poplar
	hickory	58	37	
	Virginia pine	70	109	
	white oak	60	44	
	yellow-poplar	120	149	
21E:				
Edneytown	eastern white pine	115	220	eastern white pine, yellow-poplar
	hickory	58	37	
	Virginia pine	70	109	
	white oak	60	44	
	yellow-poplar	120	149	
21F:				
Edneytown	eastern white pine	115	220	eastern white pine, yellow-poplar
	hickory	58	37	
	Virginia pine	70	109	
	white oak	60	44	
	yellow-poplar	120	149	
22C:				
Edneytown	eastern white pine	115	220	eastern white pine, yellow-poplar
	hickory	58	37	
	Virginia pine	70	109	
	white oak	60	44	
	yellow-poplar	120	149	
Urban land.				
23C:				
Edneyville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	75	57	
	Virginia pine	75	115	
	yellow-poplar	105	110	
23D:				
Edneyville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	75	57	
	Virginia pine	75	115	
	yellow-poplar	105	110	
23E:				
Edneyville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	75	57	
	Virginia pine	75	115	
	yellow-poplar	105	110	
24D:				
Edneyville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	75	57	
	Virginia pine	75	115	
	yellow-poplar	105	110	
24E:				
Edneyville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	75	57	
	Virginia pine	75	115	
	yellow-poplar	105	110	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
24F:				
Edneyville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	75	57	
	Virginia pine	75	115	
	yellow-poplar	105	110	
25B:				
Elsinboro	black oak	80	62	eastern white pine, northern red oak, yellow-poplar
	eastern white pine	130	248	
	northern red oak	80	62	
	white oak	80	62	
	yellow-poplar	140	161	
26B:				
Elsinboro	black oak	80	62	eastern white pine, northern red oak, yellow-poplar
	eastern white pine	130	248	
	northern red oak	80	62	
	white oak	80	62	
	yellow-poplar	140	161	
Urban land.				
27D:				
Evard	eastern white pine	91	168	eastern white pine, shortleaf pine, white oak, chestnut oak
	yellow-poplar	95	98	
	white oak	75	57	
	Virginia pine	70	109	
	shortleaf pine	73	116	
	southern red oak	75	57	
	pitch pine	---	---	
	hickory	---	---	
Cowee	eastern white pine	78	139	eastern white pine, shortleaf pine
	yellow-poplar	80	71	
	chestnut oak	55	38	
	Virginia pine	63	96	
	pitch pine	52	72	
	scarlet oak	54	38	
	shortleaf pine	---	---	
	white oak	---	---	
	black oak	---	---	
28B:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	
28C:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
28D:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	
28E:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	
28F:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	
29C:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	
29D:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	
29E:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	
30C:				
Glenelg	black oak	78	60	black oak, black walnut, eastern white pine, yellow-poplar
	eastern white pine	100	191	
	hickory	75	64	
	white oak	75	57	
	yellow-poplar	95	97	
Urban land.				
31D:				
Greenlee	eastern white pine	95	175	eastern white pine, yellow-poplar
	scarlet oak	55	40	
	Virginia pine	69	107	
	yellow-poplar	100	107	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
31E:				
Greenlee	eastern white pine	95	175	eastern white pine, yellow-poplar
	scarlet oak	55	40	
	Virginia pine	69	107	
	yellow-poplar	100	107	
32A:				
Hatboro	American sycamore	60	40	American sycamore, black willow, green ash, white ash
	red maple	60	40	
33B:				
Hayesville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	81	63	
	yellow-poplar	103	110	
33C:				
Hayesville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	81	63	
	yellow-poplar	103	110	
33D:				
Hayesville	eastern white pine	95	175	eastern white pine, northern red oak, yellow-poplar
	northern red oak	81	63	
	yellow-poplar	103	110	
34B:				
Keener	northern red oak	65	47	eastern white pine, northern red oak, yellow-poplar
	Virginia pine	60	47	
	yellow-poplar	85	80	
34C:				
Keener	northern red oak	65	47	eastern white pine, northern red oak, yellow-poplar
	Virginia pine	60	47	
	yellow-poplar	85	80	
34D:				
Keener	northern red oak	65	47	eastern white pine, northern red oak, yellow-poplar
	Virginia pine	60	47	
	yellow-poplar	85	80	
35C:				
Keener	northern red oak	65	47	eastern white pine, northern red oak, yellow-poplar
	Virginia pine	60	47	
	yellow-poplar	85	80	
35D:				
Keener	northern red oak	65	47	eastern white pine, northern red oak, yellow-poplar
	Virginia pine	60	47	
	yellow-poplar	85	80	
36A:				
Kinkora	American sycamore	60	40	American sycamore, black willow, green ash, white ash
	red maple	60	40	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
37C:				
Konnarock	northern red oak	77	59	eastern white pine, northern red oak
	yellow-poplar	80	76	
37D:				
Konnarock	northern red oak	77	59	eastern white pine, northern red oak
	yellow-poplar	80	76	
37E:				
Konnarock	northern red oak	77	59	eastern white pine, northern red oak
	yellow-poplar	80	76	
38C:				
McCamy	scarlet oak	75	57	eastern white pine, northern red oak, yellow-poplar
	Virginia pine	70	109	
	white oak	70	52	
	yellow-poplar	90	91	
38D:				
McCamy	scarlet oak	75	57	eastern white pine, northern red oak, yellow-poplar
	Virginia pine	70	109	
	white oak	70	52	
	yellow-poplar	90	91	
39D:				
McCamy	scarlet oak	75	57	eastern white pine, northern red oak, yellow-poplar
	Virginia pine	70	109	
	white oak	70	52	
	yellow-poplar	90	91	
39E:				
McCamy	scarlet oak	75	57	eastern white pine, northern red oak, yellow-poplar
	Virginia pine	70	109	
	white oak	70	52	
	yellow-poplar	90	91	
40D:				
Mt Rogers	Fraser fir	---	---	Fraser fir, red spruce
	red spruce	53	79	
Bloodyhorse	Fraser fir	---	---	Fraser fir, red spruce
	red spruce	50	63	
Rock outcrop.				
40F:				
Mt Rogers	Fraser fir	---	---	Fraser fir, red spruce
	red spruce	53	79	
Bloodyhorse	Fraser fir	---	---	Fraser fir, red spruce
	red spruce	50	63	
Rock outcrop.				

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
41C:				
Mt Rogers	Fraser fir	---	---	Fraser fir, red spruce
	red spruce	53	79	
Buzzrock	Fraser fir	---	---	Fraser fir, red spruce
	red spruce	52	78	
41D:				
Mt Rogers	Fraser fir	---	---	Fraser fir, red spruce
	red spruce	53	79	
Buzzrock	Fraser fir	---	---	Fraser fir, red spruce
	red spruce	52	78	
42C:				
Peaks	chestnut oak	55	40	eastern white pine
	eastern white pine	70	120	
	northern red oak	62	46	
	scarlet oak	60	44	
	Virginia pine	57	81	
42D:				
Peaks	chestnut oak	55	40	eastern white pine
	eastern white pine	70	120	
	northern red oak	62	46	
	scarlet oak	60	44	
	Virginia pine	57	81	
42E:				
Peaks	chestnut oak	55	40	eastern white pine
	eastern white pine	70	120	
	northern red oak	62	46	
	scarlet oak	60	44	
	Virginia pine	57	81	
43C:				
Peaks	chestnut oak	55	40	eastern white pine
	eastern white pine	70	120	
	northern red oak	62	46	
	scarlet oak	60	44	
	Virginia pine	57	81	
43D:				
Peaks	chestnut oak	55	40	eastern white pine
	eastern white pine	70	120	
	northern red oak	62	46	
	scarlet oak	60	44	
	Virginia pine	57	81	
43E:				
Peaks	chestnut oak	55	40	eastern white pine
	eastern white pine	70	120	
	northern red oak	62	46	
	scarlet oak	60	44	
	Virginia pine	57	81	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
43F:				
Peaks-------------------	chestnut oak--------	55	40	eastern white pine
	eastern white pine--	70	120	
	northern red oak----	62	46	
	scarlet oak---------	60	44	
	Virginia pine-------	57	81	
44C:				
Pigeonroost-------------	eastern white pine--	99	186	eastern white pine, white oak, yellow-poplar
	white oak-----------	80	62	
	yellow-poplar-------	101	109	
44D:				
Pigeonroost-------------	eastern white pine--	99	186	eastern white pine, white oak, yellow-poplar
	white oak-----------	80	62	
	yellow-poplar-------	101	109	
44E:				
Pigeonroost-------------	eastern white pine--	99	186	eastern white pine, white oak, yellow-poplar
	white oak-----------	80	62	
	yellow-poplar-------	101	109	
45D:				
Pigeonroost-------------	eastern white pine--	99	186	eastern white pine, white oak, yellow-poplar
	white oak-----------	80	62	
	yellow-poplar-------	101	109	
45E:				
Pigeonroost-------------	eastern white pine--	99	186	eastern white pine, white oak, yellow-poplar
	white oak-----------	80	62	
	yellow-poplar-------	101	109	
46E:				
Pigeonroost-------------	eastern white pine--	99	186	eastern white pine, white oak, yellow-poplar
	white oak-----------	80	62	
	yellow-poplar-------	101	109	
Rock outcrop.				
47D:				
Pineola-----------------	eastern white pine--	105	200	eastern white pine, northern red oak, yellow-poplar
	northern red oak----	80	62	
	yellow-poplar-------	110	123	
48E:				
Pineola-----------------	eastern white pine--	105	200	eastern white pine, northern red oak, yellow-poplar
	northern red oak----	80	62	
	yellow-poplar-------	110	123	
49. Pits, quarries				
50F. Rock outcrop-Peaks				
51B:				
Scales------------------	Fraser fir----------	---	---	spruce
	northern red oak----	---	---	
	red spruce----------	58	93	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
52C:				
Sylco	eastern white pine	75	131	eastern white pine
	Virginia pine	60	91	
Sylvatus	eastern white pine	70	120	eastern white pine
	Virginia pine	55	79	
52D:				
Sylco	eastern white pine	75	131	eastern white pine
	Virginia pine	60	91	
Sylvatus	eastern white pine	70	120	eastern white pine
	Virginia pine	55	79	
52E:				
Sylco	eastern white pine	75	131	eastern white pine
	Virginia pine	60	91	
Sylvatus	eastern white pine	70	120	eastern white pine
	Virginia pine	55	79	
53B:				
Tate	eastern white pine	100	191	eastern white pine, yellow-poplar
	yellow-poplar	105	110	
53C:				
Tate	eastern white pine	100	191	eastern white pine, yellow-poplar
	yellow-poplar	105	110	
53D:				
Tate	eastern white pine	100	191	eastern white pine, yellow-poplar
	yellow-poplar	105	110	
53E:				
Tate	eastern white pine	100	191	eastern white pine, yellow-poplar
	yellow-poplar	105	110	
54C:				
Tate	eastern white pine	100	191	eastern white pine, yellow-poplar
	yellow-poplar	105	110	
54D:				
Tate	eastern white pine	100	191	eastern white pine, yellow-poplar
	yellow-poplar	105	110	
54E:				
Tate	eastern white pine	100	191	eastern white pine, yellow-poplar
	yellow-poplar	105	110	
55D:				
Tate	eastern white pine	100	191	eastern white pine, yellow-poplar
	yellow-poplar	105	110	
56C:				
Thunder	yellow-poplar	100	107	eastern white pine, northern red oak, yellow-poplar
	northern red oak	93	72	
	sugar maple	80	62	
	scarlet oak	90	70	

Table 8.—Forestland Productivity—Continued

Map symbol and soil name	Potential productivity: Common trees	Site index	Volume of wood fiber	Trees to manage
			cu ft/ac	
56D:				
Thunder	yellow-poplar	100	107	eastern white pine, northern red oak, yellow-poplar
	northern red oak	93	72	
	sugar maple	80	62	
	scarlet oak	90	70	
56E:				
Thunder	yellow-poplar	100	107	eastern white pine, northern red oak, yellow-poplar
	northern red oak	93	72	
	sugar maple	80	62	
	scarlet oak	90	70	
57C:				
Thunder	yellow-poplar	100	107	eastern white pine, northern red oak, yellow-poplar
	northern red oak	93	72	
	sugar maple	80	62	
	scarlet oak	90	70	
57D:				
Thunder	yellow-poplar	100	107	eastern white pine, northern red oak, yellow-poplar
	northern red oak	93	72	
	sugar maple	80	62	
	scarlet oak	90	70	
57E:				
Thunder	yellow-poplar	100	107	eastern white pine, northern red oak, yellow-poplar
	northern red oak	93	72	
	sugar maple	80	62	
	scarlet oak	90	70	
58D. Udorthents-Urban land				
59D:				
Unicoi	chestnut oak	50	34	Virginia pine
	scarlet oak	50	34	
	Virginia pine	50	64	
59E:				
Unicoi	chestnut oak	50	34	Virginia pine
	scarlet oak	50	34	
	Virginia pine	50	64	
W. Water				

Table 9.—Forestland Management, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
1C:							
Balsam	85	Slight		Moderately suited		Slight	
				Slope	0.50	Strength	0.10
				Rock fragments	0.50		
1D:							
Balsam	85	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
				Rock fragments	0.50		
1E:							
Balsam	85	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
				Rock fragments	0.50		
2D:							
Balsam	70	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
				Rock fragments	0.50		
Nopan	20	Severe		Poorly suited		Severe	
		Wetness	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	1.00		
				Wetness	0.50		
2E:							
Balsam	70	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
				Rock fragments	0.50		
Nopan	20	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Wetness	1.00	Low strength	1.00		
				Wetness	0.50		
3D:							
Bloodyhorse	80	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
		Restrictive layer	0.50	Rock fragments	0.50		
4F:							
Bloodyhorse	80	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Stoniness	0.50	Rock fragments	1.00		
5B:							
Braddock	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
5C:							
Braddock	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
5D:							
Braddock------------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
6E:							
Braddock------------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
7D:							
Brevard-------------	50	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
				Rock fragments	0.50		
Greenlee------------	35	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
				Rock fragments	0.50		
8C:							
Burton--------------	90	Severe		Poorly suited		Severe	
		Low strength	1.00	Low strength	1.00	Low strength	1.00
		Restrictive layer	0.50	Slope	0.50		
9D:							
Burton--------------	90	Severe		Poorly suited		Severe	
		Low strength	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	1.00		
		Restrictive layer	0.50				
9E:							
Burton--------------	90	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	1.00	Low strength	1.00		
10D:							
Peaks---------------	20	Moderate		Poorly suited		Slight	
		Restrictive layer	0.50	Slope	1.00	Strength	0.10
		Slope	0.50	Sandiness	0.50		
Chestnut------------	65	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Restrictive layer	0.50				
10E:							
Chestnut------------	65	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
Peaks---------------	20	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
				Sandiness	0.50		
11F:							
Chestnut------------	40	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
Peaks---------------	25	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
				Sandiness	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
11F:							
Tuckasegee----------	20	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
12A:							
Codorus-------------	90	Severe		Poorly suited		Severe	
		Flooding	1.00	Flooding	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
		Wetness	0.50				
13A:							
Comus---------------	90	Severe		Poorly suited		Moderate	
		Flooding	1.00	Flooding	1.00	Low strength	0.50
14C:							
Cowee---------------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
14D:							
Cowee---------------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
14E:							
Cowee---------------	90	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
15D:							
Cowee---------------	90	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
15E:							
Cowee---------------	90	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
16D:							
Cowee---------------	60	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Rock outcrop--------	35	Not rated		Not rated		Not rated	
16E:							
Cowee---------------	60	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
Rock outcrop--------	35	Not rated		Not rated		Not rated	
17A:							
Craigsville---------	85	Severe		Poorly suited		Moderate	
		Flooding	1.00	Flooding	1.00	Low strength	0.50

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
18C:							
Cullasaja-----------	85	Severe		Poorly suited		Severe	
		Low strength	1.00	Low strength	1.00	Low strength	1.00
		Stoniness	1.00	Slope	0.50		
18D:							
Cullasaja-----------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	1.00		
19A:							
Delanco-------------	90	Slight		Well suited		Moderate	
						Low strength	0.50
19B:							
Delanco-------------	90	Slight		Well suited		Moderate	
						Low strength	0.50
20C:							
Delanco-------------	90	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
21B:							
Edneytown-----------	90	Slight		Moderately suited		Severe	
				Low strength	0.50	Low strength	1.00
21C:							
Edneytown-----------	90	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
				Low strength	0.50		
21D:							
Edneytown-----------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
21E:							
Edneytown-----------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
21F:							
Edneytown-----------	90	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
22C:							
Edneytown-----------	60	Slight		Moderately suited		Severe	
				Slope	0.50	Low strength	1.00
				Low strength	0.50		
Urban land----------	35	Not rated		Not rated		Not rated	
23C:							
Edneyville----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
23D:							
Edneyville----------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
23E:							
Edneyville----------	90	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
24D:							
Edneyville----------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
24E:							
Edneyville----------	90	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
24F:							
Edneyville----------	90	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
25B:							
Elsinboro-----------	90	Slight		Well suited		Moderate	
						Low strength	0.50
26B:							
Elsinboro-----------	60	Slight		Well suited		Moderate	
						Low strength	0.50
Urban land----------	35	Not rated		Not rated		Not rated	
27D:							
Evard---------------	50	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
Cowee---------------	35	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
28B:							
Glenelg-------------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
28C:							
Glenelg-------------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
28D:							
Glenelg-------------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
28E:							
Glenelg-------------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
28F:							
Glenelg-------------	90	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
29C:							
Glenelg-------------	90	Moderate		Moderately suited		Moderate	
		Low strength	0.50	Slope	0.50	Low strength	0.50
29D:							
Glenelg-------------	90	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
29E:							
Glenelg-------------	90	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
30C:							
Glenelg-------------	60	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
Urban land----------	35	Not rated		Not rated		Not rated	
31D:							
Greenlee------------	90	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
31E:							
Greenlee------------	90	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
32A:							
Hatboro-------------	90	Severe		Poorly suited		Moderate	
		Flooding	1.00	Ponding	1.00	Low strength	0.50
		Wetness	1.00	Flooding	1.00		
				Wetness	0.50		
33B:							
Hayesville----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
33C:							
Hayesville----------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
33D:							
Hayesville----------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
34B:							
Keener	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
34C:							
Keener	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
34D:							
Keener	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
35C:							
Keener	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
35D:							
Keener	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
36A:							
Kinkora	90	Severe		Poorly suited		Moderate	
		Wetness	1.00	Ponding	1.00	Low strength	0.50
				Wetness	0.50		
37C:							
Konnarock	90	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
37D:							
Konnarock	90	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
37E:							
Konnarock	90	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
38C:							
McCamy	85	Moderate		Moderately suited		Moderate	
		Restrictive layer	0.50	Slope	0.50	Low strength	0.50
38D:							
McCamy	85	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Restrictive layer	0.50				
39D:							
McCamy	85	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Restrictive layer	0.50				

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
39E:							
McCamy--------------	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
40D:							
Mt Rogers-----------	45	Severe		Poorly suited		Slight	
		Stoniness	1.00	Rock fragments	1.00	Strength	0.10
		Slope	0.50	Slope	1.00		
Bloodyhorse---------	25	Severe		Poorly suited		Slight	
		Stoniness	1.00	Rock fragments	1.00	Strength	0.10
		Slope	0.50	Slope	1.00		
		Restrictive layer	0.50				
Rock outcrop--------	15	Not rated		Not rated		Not rated	
40F:							
Mt Rogers-----------	45	Severe		Poorly suited		Slight	
		Slope	1.00	Rock fragments	1.00	Strength	0.10
		Stoniness	1.00	Slope	1.00		
Bloodyhorse---------	25	Severe		Poorly suited		Slight	
		Slope	1.00	Rock fragments	1.00	Strength	0.10
		Stoniness	1.00	Slope	1.00		
Rock outcrop--------	15	Not rated		Not rated		Not rated	
41C:							
Mt Rogers-----------	45	Severe		Moderately suited		Slight	
		Stoniness	1.00	Slope	0.50	Strength	0.10
				Rock fragments	0.50		
Buzzrock------------	40	Slight		Moderately suited		Moderate	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
41D:							
Mt Rogers-----------	45	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
				Rock fragments	0.50		
Buzzrock------------	40	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
		Restrictive layer	0.50	Rock fragments	0.50		
42C:							
Peaks---------------	90	Moderate		Moderately suited		Slight	
		Restrictive layer	0.50	Slope	0.50	Strength	0.10
				Sandiness	0.50		
42D:							
Peaks---------------	90	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
		Restrictive layer	0.50	Sandiness	0.50		
42E:							
Peaks---------------	90	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
				Sandiness	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
43C:							
Peaks---------------	90	Moderate		Moderately suited		Slight	
		Restrictive layer	0.50	Slope	0.50	Strength	0.10
		Stoniness	0.50	Rock fragments	0.50		
				Sandiness	0.50		
43D:							
Peaks---------------	90	Moderate		Poorly suited		Slight	
		Slope	0.50	Slope	1.00	Strength	0.10
		Restrictive layer	0.50	Rock fragments	0.50		
		Stoniness	0.50	Sandiness	0.50		
43E:							
Peaks---------------	90	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Stoniness	0.50	Rock fragments	0.50		
				Sandiness	0.50		
43F:							
Peaks---------------	90	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Stoniness	0.50	Rock fragments	0.50		
				Sandiness	0.50		
44C:							
Pigeonroost---------	85	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
44D:							
Pigeonroost---------	85	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
44E:							
Pigeonroost---------	85	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
45D:							
Pigeonroost---------	85	Moderate		Poorly suited		Moderate	
		Slope	0.50	Slope	1.00	Low strength	0.50
45E:							
Pigeonroost---------	85	Severe		Poorly suited		Moderate	
		Slope	1.00	Slope	1.00	Low strength	0.50
		Low strength	0.50				
46E:							
Pigeonroost---------	60	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
Rock outcrop--------	30	Not rated		Not rated		Not rated	
47D:							
Pineola-------------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
48E:							
Pineola-------------	90	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
49:							
Pits, quarries------	100	Not rated		Not rated		Not rated	
50F:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Peaks---------------	40	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
				Sandiness	0.50		
51B:							
Scales--------------	95	Severe		Poorly suited		Severe	
		Wetness	1.00	Low strength	1.00	Low strength	1.00
				Wetness	1.00	Wetness	0.50
				Rock fragments	0.50		
52C:							
Sylco---------------	50	Moderate		Moderately suited		Severe	
		Restrictive layer	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
Sylvatus------------	35	Severe		Moderately suited		Severe	
		Restrictive layer	1.00	Slope	0.50	Low strength	1.00
52D:							
Sylco---------------	50	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50	Low strength	0.50		
Sylvatus------------	35	Severe		Poorly suited		Severe	
		Restrictive layer	1.00	Slope	1.00	Low strength	1.00
		Slope	0.50				
52E:							
Sylco---------------	50	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
Sylvatus------------	35	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
53B:							
Tate----------------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Low strength	0.50	Low strength	1.00
53C:							
Tate----------------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
53D:							
Tate----------------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings: Rating class and limiting features	Value	Suitability for log landings: Rating class and limiting features	Value	Soil rutting hazard: Rating class and limiting features	Value
53E:							
Tate----------------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
54C:							
Tate----------------	90	Moderate		Moderately suited		Severe	
		Low strength	0.50	Slope	0.50	Low strength	1.00
				Low strength	0.50		
54D:							
Tate----------------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
54E:							
Tate----------------	90	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
55D:							
Tate----------------	90	Moderate		Poorly suited		Severe	
		Slope	0.50	Rock fragments	1.00	Low strength	1.00
		Stoniness	0.50	Slope	1.00		
				Low strength	0.50		
56C:							
Thunder-------------	80	Severe		Moderately suited		Severe	
		Stoniness	1.00	Slope	0.50	Low strength	1.00
		Low strength	0.50	Low strength	0.50		
56D:							
Thunder-------------	80	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Low strength	0.50		
56E:							
Thunder-------------	80	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Low strength	0.50		
57C:							
Thunder-------------	80	Severe		Moderately suited		Severe	
		Stoniness	1.00	Slope	0.50	Low strength	1.00
		Low strength	0.50	Rock fragments	0.50		
				Low strength	0.50		
57D:							
Thunder-------------	80	Moderate		Poorly suited		Severe	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Rock fragments	0.50		
				Low strength	0.50		
57E:							
Thunder-------------	80	Severe		Poorly suited		Severe	
		Slope	1.00	Slope	1.00	Low strength	1.00
				Rock fragments	0.50		
				Low strength	0.50		

Table 9.—Forestland Management, Part I—Continued

Map symbol and soil name	Pct. of map unit	Limitations affecting construction of haul roads and log landings		Suitability for log landings		Soil rutting hazard	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
58D:							
Udorthents----------	50	Not rated		Not rated		Not rated	
Urban land----------	35	Not rated		Not rated		Not rated	
59D:							
Unicoi--------------	85	Severe		Poorly suited		Slight	
		Restrictive layer	1.00	Slope	1.00	Strength	0.10
		Slope	0.50	Rock fragments	0.50		
		Stoniness	0.50				
59E:							
Unicoi--------------	85	Severe		Poorly suited		Slight	
		Slope	1.00	Slope	1.00	Strength	0.10
		Stoniness	0.50	Rock fragments	0.50		
W:							
Water---------------	100	Not rated		Not rated		Not rated	

Table 9.—Forestland Management, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion		Hazard of erosion on roads and trails		Suitability for roads (natural surface)	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1C:							
Balsam	85	Slight		Slight		Moderately suited	
						Slope	0.50
						Rock fragments	0.50
1D:							
Balsam	85	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Rock fragments	0.50
1E:							
Balsam	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
2D:							
Balsam	70	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Rock fragments	0.50
Nopan	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	1.00
						Wetness	0.50
2E:							
Balsam	70	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
Nopan	20	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	1.00
						Wetness	0.50
3D:							
Bloodyhorse	80	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
4F:							
Bloodyhorse	80	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	1.00
5B:							
Braddock	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
5C:							
Braddock	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
5D:							
Braddock------------	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
6E:							
Braddock------------	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
7D:							
Brevard-------------	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
Greenlee------------	35	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Rock fragments	0.50
8C:							
Burton--------------	90	Slight		Severe		Poorly suited	
				Slope/erodibility	0.95	Low strength	1.00
						Slope	0.50
9D:							
Burton--------------	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	1.00
9E:							
Burton--------------	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	1.00
10D:							
Peaks---------------	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
Chestnut------------	65	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
10E:							
Chestnut------------	65	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
Peaks---------------	20	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
11F:							
Chestnut------------	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
Peaks---------------	25	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
Tuckasegee----------	20	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
12A:							
Codorus-------------	90	Slight		Slight		Poorly suited	
						Flooding	1.00
						Low strength	0.50
13A:							
Comus---------------	90	Slight		Slight		Poorly suited	
						Flooding	1.00
14C:							
Cowee---------------	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
14D:							
Cowee---------------	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
14E:							
Cowee---------------	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
15D:							
Cowee---------------	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
15E:							
Cowee---------------	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
16D:							
Cowee---------------	60	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Rock outcrop--------	35	Not rated		Not rated		Not rated	
16E:							
Cowee---------------	60	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Rock outcrop--------	35	Not rated		Not rated		Not rated	
17A:							
Craigsville---------	85	Slight		Slight		Poorly suited	
						Flooding	1.00
18C:							
Cullasaja-----------	85	Slight		Moderate		Poorly suited	
				Slope/erodibility	0.50	Low strength	1.00
						Slope	0.50
18D:							
Cullasaja-----------	85	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Low strength	1.00

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
19A:							
Delanco	90	Slight		Slight		Well suited	
19B:							
Delanco	90	Slight		Moderate		Well suited	
				Slope/erodibility	0.50		
20C:							
Delanco	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
21B:							
Edneytown	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
21C:							
Edneytown	90	Moderate		Severe		Moderately suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
21D:							
Edneytown	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
21E:							
Edneytown	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
21F:							
Edneytown	90	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
22C:							
Edneytown	60	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
Urban land	35	Not rated		Not rated		Not rated	
23C:							
Edneyville	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
23D:							
Edneyville	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
23E:							
Edneyville	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
24D:							
Edneyville	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
24E:							
Edneyville	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
24F:							
Edneyville	90	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
25B:							
Elsinboro	90	Slight		Moderate		Well suited	
				Slope/erodibility	0.50		
26B:							
Elsinboro	60	Slight		Slight		Well suited	
Urban land	35	Not rated		Not rated		Not rated	
27D:							
Evard	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
Cowee	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
28B:							
Glenelg	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
28C:							
Glenelg	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
28D:							
Glenelg	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
28E:							
Glenelg	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
28F:							
Glenelg	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
29C:							
Glenelg	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
29D:							
Glenelg	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
29E:							
Glenelg	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
30C:							
Glenelg	60	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
Urban land	35	Not rated		Not rated		Not rated	
31D:							
Greenlee	90	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
31E:							
Greenlee	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
32A:							
Hatboro	90	Slight		Slight		Poorly suited	
						Ponding	1.00
						Flooding	1.00
						Wetness	0.50
33B:							
Hayesville	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
33C:							
Hayesville	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
33D:							
Hayesville	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
34B:							
Keener	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
34C:							
Keener	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
34D:							
Keener	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
35C:							
Keener	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
35D:							
Keener	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
36A:							
Kinkora	90	Slight		Slight		Poorly suited	
						Ponding	1.00
						Wetness	0.50
37C:							
Konnarock	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
37D:							
Konnarock	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
37E:							
Konnarock	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
38C:							
McCamy	85	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
38D:							
McCamy	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
39D:							
McCamy	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
39E:							
McCamy	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
40D:							
Mt Rogers	45	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Rock fragments	1.00
						Slope	1.00
Bloodyhorse	25	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Rock fragments	1.00
						Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
40F:							
Mt Rogers	45	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Rock fragments	1.00
						Slope	1.00
Bloodyhorse	25	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Rock fragments	1.00
						Slope	1.00

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
40F:							
Rock outcrop--------	15	Not rated		Not rated		Not rated	
41C:							
Mt Rogers-----------	45	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Rock fragments	0.50
Buzzrock------------	40	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Rock fragments	0.50
41D:							
Mt Rogers-----------	45	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Rock fragments	0.50
Buzzrock------------	40	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Rock fragments	0.50
42C:							
Peaks---------------	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Sandiness	0.50
42D:							
Peaks---------------	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
42E:							
Peaks---------------	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
43C:							
Peaks---------------	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Rock fragments	0.50
						Sandiness	0.50
43D:							
Peaks---------------	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Sandiness	0.50
43E:							
Peaks---------------	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Sandiness	0.50
43F:							
Peaks---------------	90	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Sandiness	0.50

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
44C:							
Pigeonroost----------	85	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
44D:							
Pigeonroost----------	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
44E:							
Pigeonroost----------	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
45D:							
Pigeonroost----------	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
45E:							
Pigeonroost----------	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
46E:							
Pigeonroost----------	60	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Rock outcrop---------	30	Not rated		Not rated		Not rated	
47D:							
Pineola--------------	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
48E:							
Pineola--------------	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
49:							
Pits, quarries------	100	Not rated		Not rated		Not rated	
50F:							
Rock outcrop---------	50	Not rated		Not rated		Not rated	
Peaks----------------	40	Very severe		Severe		Poorly suited	
		Slope/erodibility	0.95	Slope/erodibility	0.95	Slope	1.00
						Sandiness	0.50
51B:							
Scales---------------	95	Slight		Slight		Poorly suited	
						Low strength	1.00
						Wetness	1.00
						Rock fragments	0.50
52C:							
Sylco----------------	50	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
52C:							
Sylvatus	35	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
52D:							
Sylco	50	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Sylvatus	35	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
52E:							
Sylco	50	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
Sylvatus	35	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
53B:							
Tate	90	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Low strength	0.50
53C:							
Tate	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
53D:							
Tate	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
53E:							
Tate	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
54C:							
Tate	90	Slight		Severe		Moderately suited	
				Slope/erodibility	0.95	Slope	0.50
						Low strength	0.50
54D:							
Tate	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
54E:							
Tate	90	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
55D:							
Tate	90	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Rock fragments	1.00
						Slope	1.00
						Low strength	0.50

Table 9.—Forestland Management, Part II—Continued

Map symbol and soil name	Pct. of map unit	Hazard of off-road or off-trail erosion: Rating class and limiting features	Value	Hazard of erosion on roads and trails: Rating class and limiting features	Value	Suitability for roads (natural surface): Rating class and limiting features	Value
56C:							
Thunder	80	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Low strength	0.50
56D:							
Thunder	80	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Low strength	0.50
56E:							
Thunder	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Low strength	0.50
57C:							
Thunder	80	Slight		Moderate		Moderately suited	
				Slope/erodibility	0.50	Slope	0.50
						Rock fragments	0.50
						Low strength	0.50
57D:							
Thunder	80	Moderate		Moderate		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.50	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
57E:							
Thunder	80	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
						Low strength	0.50
58D:							
Udorthents	50	Not rated		Not rated		Not rated	
Urban land	35	Not rated		Not rated		Not rated	
59D:							
Unicoi	85	Moderate		Severe		Poorly suited	
		Slope/erodibility	0.50	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
59E:							
Unicoi	85	Severe		Severe		Poorly suited	
		Slope/erodibility	0.75	Slope/erodibility	0.95	Slope	1.00
						Rock fragments	0.50
W:							
Water	100	Not rated		Not rated		Not rated	

Table 9.—Forestland Management, Part III

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
1C:							
Balsam	85	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Rock fragments	0.50
				Slope	0.50		
1D:							
Balsam	85	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Rock fragments	0.50
				Rock fragments	0.75	Slope	0.50
1E:							
Balsam	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Rock fragments	0.50
2D:							
Balsam	70	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Rock fragments	0.50
				Rock fragments	0.75	Slope	0.50
Nopan	20	Well suited		Poorly suited		Poorly suited	
				Slope	0.75	Low strength	1.00
				Rock fragments	0.50	Wetness	1.00
						Rock fragments	0.50
2E:							
Balsam	70	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Rock fragments	0.50
Nopan	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Rock fragments	0.50	Wetness	1.00
						Slope	1.00
3D:							
Bloodyhorse	80	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Rock fragments	0.50
				Rock fragments	0.75	Slope	0.50
4F:							
Bloodyhorse	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Rock fragments	1.00
		Rock fragments	0.50	Rock fragments	0.75	Slope	1.00
5B:							
Braddock	90	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
				Slope	0.50		

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
5C:							
Braddock	90	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
				Slope	0.50		
5D:							
Braddock	90	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50	Slope	0.50
6E:							
Braddock	90	Moderately suited		Unsuited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	1.00	Low strength	0.50
		Rock fragments	0.50	Rock fragments	0.50	Slope	0.50
				Stickiness; high plasticity index	0.50		
7D:							
Brevard	50	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Rock fragments	0.50
				Rock fragments	0.50		
Greenlee	35	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Rock fragments	0.50
				Slope	0.75		
8C:							
Burton	90	Well suited		Moderately suited		Poorly suited	
				Slope	0.50	Low strength	1.00
9D:							
Burton	90	Well suited		Poorly suited		Poorly suited	
				Slope	0.75	Low strength	1.00
				Rock fragments	0.50	Slope	0.50
9E:							
Burton	90	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Low strength	1.00
				Rock fragments	0.50	Slope	1.00
10D:							
Peaks	20	Moderately suited		Poorly suited		Moderately suited	
		Sandiness	0.50	Slope	0.75	Sandiness	0.50
		Rock fragments	0.50	Rock fragments	0.75		
				Sandiness	0.50		
Chestnut	65	Well suited		Poorly suited		Well suited	
				Slope	0.75		
				Rock fragments	0.50		
10E:							
Chestnut	65	Moderately suited		Unsuited		Moderately suited	
		Slope	0.50	Slope	1.00	Slope	0.50
				Rock fragments	0.50		
Peaks	20	Moderately suited		Unsuited		Moderately suited	
		Sandiness	0.50	Slope	1.00	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.75	Sandiness	0.50
		Slope	0.50	Sandiness	0.50		

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
11F:							
Chestnut	40	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
Peaks	25	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Sandiness	0.50	Rock fragments	0.75	Sandiness	0.50
		Rock fragments	0.50	Sandiness	0.50		
Tuckasegee	20	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
12A:							
Codorus	90	Moderately suited		Moderately suited		Moderately suited	
		Sandiness	0.50	Sandiness	0.50	Low strength	0.50
						Wetness	0.50
13A:							
Comus	90	Well suited		Well suited		Well suited	
14C:							
Cowee	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
14D:							
Cowee	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
14E:							
Cowee	90	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
15D:							
Cowee	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
15E:							
Cowee	90	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
16D:							
Cowee	60	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
Rock outcrop	35	Not rated		Not rated		Not rated	
16E:							
Cowee	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
Rock outcrop	35	Not rated		Not rated		Not rated	

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
17A:							
Craigsville----------	85	Moderately suited		Unsuited		Well suited	
		Rock fragments	0.50	Rock fragments	1.00		
18C:							
Cullasaja-----------	85	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Rock fragments	1.00	Low strength	1.00
				Slope	0.50		
18D:							
Cullasaja-----------	85	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Rock fragments	1.00	Low strength	1.00
				Slope	0.75	Slope	0.50
19A:							
Delanco-------------	90	Well suited		Well suited		Well suited	
19B:							
Delanco-------------	90	Well suited		Moderately suited		Well suited	
				Slope	0.50		
20C:							
Delanco-------------	90	Well suited		Moderately suited		Well suited	
				Slope	0.50		
21B:							
Edneytown-----------	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
21C:							
Edneytown-----------	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
21D:							
Edneytown-----------	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
21E:							
Edneytown-----------	90	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Low strength	0.50
						Slope	0.50
21F:							
Edneytown-----------	90	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
22C:							
Edneytown-----------	60	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Urban land----------	35	Not rated		Not rated		Not rated	
23C:							
Edneyville----------	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
23D:							
Edneyville----------	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
23E:							
Edneyville----------	90	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
24D:							
Edneyville----------	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
24E:							
Edneyville----------	90	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
24F:							
Edneyville----------	90	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
25B:							
Elsinboro-----------	90	Well suited		Moderately suited		Well suited	
				Slope	0.50		
26B:							
Elsinboro-----------	60	Well suited		Well suited		Well suited	
Urban land----------	35	Not rated		Not rated		Not rated	
27D:							
Evard---------------	50	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
Cowee---------------	35	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
28B:							
Glenelg-------------	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
28C:							
Glenelg-------------	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
28D:							
Glenelg-------------	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
28E:							
Glenelg-------------	90	Well suited		Unsuited		Moderately suited	
				Slope	1.00	Low strength	0.50
						Slope	0.50

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
28F:							
Glenelg	90	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
						Low strength	0.50
29C:							
Glenelg	90	Well suited		Moderately suited		Well suited	
				Slope	0.50		
				Rock fragments	0.50		
29D:							
Glenelg	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
29E:							
Glenelg	90	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
30C:							
Glenelg	60	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
Urban land	35	Not rated		Not rated		Not rated	
31D:							
Greenlee	90	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Slope	0.50
				Slope	0.75		
31E:							
Greenlee	90	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00		
32A:							
Hatboro	90	Poorly suited		Poorly suited		Poorly suited	
		Wetness	0.75	Wetness	0.75	Wetness	1.00
33B:							
Hayesville	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
33C:							
Hayesville	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
33D:							
Hayesville	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
34B:							
Keener	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
34C:							
Keener	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
34D:							
Keener--------------	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
35C:							
Keener--------------	90	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Low strength	0.50
				Rock fragments	0.50		
35D:							
Keener--------------	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
				Rock fragments	0.50	Slope	0.50
36A:							
Kinkora-------------	90	Poorly suited		Poorly suited		Poorly suited	
		Wetness	0.75	Wetness	0.75	Wetness	1.00
		Sandiness	0.50	Sandiness	0.50		
37C:							
Konnarock-----------	90	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.50		
37D:							
Konnarock-----------	90	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Low strength	0.50
				Rock fragments	0.75	Slope	0.50
37E:							
Konnarock-----------	90	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	0.75	Low strength	0.50
38C:							
McCamy--------------	85	Well suited		Moderately suited		Well suited	
				Slope	0.50		
38D:							
McCamy--------------	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
39D:							
McCamy--------------	85	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Slope	0.50
				Rock fragments	0.50		
39E:							
McCamy--------------	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50		
40D:							
Mt Rogers-----------	45	Poorly suited		Unsuited		Poorly suited	
		Rock fragments	0.75	Rock fragments	1.00	Rock fragments	1.00
				Slope	0.75	Slope	0.50

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
40D:							
Bloodyhorse	25	Poorly suited		Unsuited		Poorly suited	
		Rock fragments	0.75	Rock fragments	1.00	Rock fragments	1.00
				Slope	0.75	Slope	0.50
Rock outcrop	15	Not rated		Not rated		Not rated	
40F:							
Mt Rogers	45	Poorly suited		Unsuited		Poorly suited	
		Rock fragments	0.75	Slope	1.00	Rock fragments	1.00
		Slope	0.50	Rock fragments	1.00	Slope	1.00
Bloodyhorse	25	Poorly suited		Unsuited		Poorly suited	
		Rock fragments	0.75	Slope	1.00	Rock fragments	1.00
		Slope	0.50	Rock fragments	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
41C:							
Mt Rogers	45	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Rock fragments	0.50
				Rock fragments	0.50		
Buzzrock	40	Well suited		Moderately suited		Moderately suited	
				Slope	0.50	Rock fragments	0.50
				Rock fragments	0.50		
41D:							
Mt Rogers	45	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Rock fragments	0.50
				Rock fragments	0.50	Slope	0.50
Buzzrock	40	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Rock fragments	0.50
				Rock fragments	0.50	Slope	0.50
42C:							
Peaks	90	Moderately suited		Poorly suited		Moderately suited	
		Sandiness	0.50	Rock fragments	0.75	Sandiness	0.50
		Rock fragments	0.50	Slope	0.50		
				Sandiness	0.50		
42D:							
Peaks	90	Moderately suited		Poorly suited		Moderately suited	
		Sandiness	0.50	Slope	0.75	Sandiness	0.50
		Rock fragments	0.50	Rock fragments	0.75	Slope	0.50
				Sandiness	0.50		
42E:							
Peaks	90	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Sandiness	0.50	Rock fragments	0.75	Sandiness	0.50
		Rock fragments	0.50	Sandiness	0.50		
43C:							
Peaks	90	Moderately suited		Poorly suited		Moderately suited	
		Sandiness	0.50	Rock fragments	0.75	Rock fragments	0.50
		Rock fragments	0.50	Slope	0.50	Sandiness	0.50
				Sandiness	0.50		

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
43D:							
Peaks	90	Moderately suited		Poorly suited		Moderately suited	
		Sandiness	0.50	Slope	0.75	Rock fragments	0.50
		Rock fragments	0.50	Rock fragments	0.75	Sandiness	0.50
				Sandiness	0.50	Slope	0.50
43E:							
Peaks	90	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Sandiness	0.50	Rock fragments	0.75	Rock fragments	0.50
		Rock fragments	0.50	Sandiness	0.50	Sandiness	0.50
43F:							
Peaks	90	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Sandiness	0.50	Rock fragments	0.75	Rock fragments	0.50
		Rock fragments	0.50	Sandiness	0.50	Sandiness	0.50
44C:							
Pigeonroost	85	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		
44D:							
Pigeonroost	85	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50	Slope	0.50
44E:							
Pigeonroost	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
45D:							
Pigeonroost	85	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Slope	0.50
				Rock fragments	0.50		
				Stickiness; high plasticity index	0.50		
45E:							
Pigeonroost	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Stickiness; high plasticity index	0.50	Rock fragments	0.50		
				Stickiness; high plasticity index	0.50		
46E:							
Pigeonroost	60	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
47D:							
Pineola	90	Well suited		Poorly suited		Moderately suited	
				Slope	0.75	Low strength	0.50
						Slope	0.50
48E:							
Pineola	90	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
				Rock fragments	0.50	Low strength	0.50
49:							
Pits, quarries	100	Not rated		Not rated		Not rated	
50F:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Peaks	40	Moderately suited		Unsuited		Poorly suited	
		Sandiness	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Sandiness	0.50
		Slope	0.50	Sandiness	0.50		
51B:							
Scales	95	Moderately suited		Poorly suited		Poorly suited	
		Wetness	0.50	Wetness	0.75	Low strength	1.00
		Stickiness; high plasticity index	0.50	Rock fragments	0.50	Wetness	1.00
				Stickiness; high plasticity index	0.50	Rock fragments	0.50
52C:							
Sylco	50	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
				Slope	0.50		
Sylvatus	35	Moderately suited		Unsuited		Well suited	
		Rock fragments	0.50	Rock fragments	1.00		
				Slope	0.50		
52D:							
Sylco	50	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Low strength	0.50
				Rock fragments	0.75	Slope	0.50
Sylvatus	35	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Slope	0.50
				Slope	0.75		
52E:							
Sylco	50	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Low strength	0.50
Sylvatus	35	Moderately suited		Unsuited		Poorly suited	
		Rock fragments	0.50	Slope	1.00	Slope	1.00
		Slope	0.50	Rock fragments	1.00		
53B:							
Tate	90	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
53C:							
Tate----------------	90	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		
53D:							
Tate----------------	90	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50	Slope	0.50
53E:							
Tate----------------	90	Moderately suited		Unsuited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	1.00	Low strength	0.50
				Stickiness; high plasticity index	0.50	Slope	0.50
54C:							
Tate----------------	90	Moderately suited		Moderately suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.50	Low strength	0.50
				Stickiness; high plasticity index	0.50		
54D:							
Tate----------------	90	Moderately suited		Poorly suited		Moderately suited	
		Stickiness; high plasticity index	0.50	Slope	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50	Slope	0.50
54E:							
Tate----------------	90	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Stickiness; high plasticity index	0.50	Stickiness; high plasticity index	0.50	Low strength	0.50
55D:							
Tate----------------	90	Moderately suited		Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.75	Rock fragments	1.00
		Stickiness; high plasticity index	0.50	Rock fragments	0.75	Low strength	0.50
				Stickiness; high plasticity index	0.50	Slope	0.50
56C:							
Thunder-------------	80	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Low strength	0.50
				Slope	0.50		
56D:							
Thunder-------------	80	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Low strength	0.50
				Slope	0.75	Slope	0.50
56E:							
Thunder-------------	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00	Low strength	0.50

Table 9.—Forestland Management, Part III—Continued

Map symbol and soil name	Pct. of map unit	Suitability for hand planting: Rating class and limiting features	Value	Suitability for mechanical planting: Rating class and limiting features	Value	Suitability for use of harvesting equipment: Rating class and limiting features	Value
57C:							
Thunder	80	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Rock fragments	0.50
				Slope	0.50	Low strength	0.50
57D:							
Thunder	80	Moderately suited		Unsuited		Moderately suited	
		Rock fragments	0.50	Rock fragments	1.00	Rock fragments	0.50
				Slope	0.75	Low strength	0.50
						Slope	0.50
57E:							
Thunder	80	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	1.00	Rock fragments	0.50
						Low strength	0.50
58D:							
Udorthents	50	Not rated		Not rated		Not rated	
Urban land	35	Not rated		Not rated		Not rated	
59D:							
Unicoi	85	Moderately suited		Poorly suited		Moderately suited	
		Rock fragments	0.50	Slope	0.75	Rock fragments	0.50
				Rock fragments	0.75	Slope	0.50
59E:							
Unicoi	85	Moderately suited		Unsuited		Poorly suited	
		Slope	0.50	Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.75	Rock fragments	0.50
W:							
Water	100	Not rated		Not rated		Not rated	

Table 9.—Forestland Management, Part IV

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
1C:					
Balsam	85	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
1D:					
Balsam	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
1E:					
Balsam	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
2D:					
Balsam	70	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
Nopan	20	Poorly suited		Unsuited	
		Slope	0.50	Wetness	1.00
		Rock fragments	0.50	Slope	0.50
2E:					
Balsam	70	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
Nopan	20	Unsuited		Unsuited	
		Slope	1.00	Wetness	1.00
		Rock fragments	0.50	Slope	1.00
3D:					
Bloodyhorse	80	Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.50
		Slope	0.50		
4F:					
Bloodyhorse	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	1.00	Rock fragments	0.50
5B:					
Braddock	90	Well suited		Well suited	
5C:					
Braddock	90	Well suited		Well suited	
5D:					
Braddock	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
6E:					
Braddock	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
7D:					
Brevard	50	Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.50
		Slope	0.50		
Greenlee	35	Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.50
		Slope	0.50	Rock fragments	0.50
8C:					
Burton	90	Well suited		Poorly suited	
				Restrictive layer	0.50
9D:					
Burton	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
9E:					
Burton	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
10D:					
Peaks	20	Poorly suited		Poorly suited	
		Rock fragments	0.50	Slope	0.50
		Slope	0.50	Restrictive layer	0.50
Chestnut	65	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
10E:					
Chestnut	65	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Peaks	20	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Restrictive layer	0.50
11F:					
Chestnut	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Peaks	25	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
Tuckasegee	20	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
12A:					
Codorus	90	Well suited		Unsuited	
				Wetness	1.00

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
13A:					
Comus	90	Well suited		Well suited	
14C:					
Cowee	90	Well suited		Well suited	
14D:					
Cowee	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
14E:					
Cowee	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
15D:					
Cowee	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
15E:					
Cowee	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
16D:					
Cowee	60	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Rock outcrop	35	Not rated		Not rated	
16E:					
Cowee	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop	35	Not rated		Not rated	
17A:					
Craigsville	85	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
18C:					
Cullasaja	85	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
18D:					
Cullasaja	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
19A:					
Delanco	90	Well suited		Well suited	
19B:					
Delanco	90	Well suited		Well suited	
20C:					
Delanco	90	Well suited		Well suited	
21B:					
Edneytown	90	Well suited		Well suited	

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
21C:					
Edneytown	90	Well suited		Well suited	
21D:					
Edneytown	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
21E:					
Edneytown	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
21F:					
Edneytown	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
22C:					
Edneytown	60	Well suited		Well suited	
Urban land	35	Not rated		Not rated	
23C:					
Edneyville	90	Well suited		Well suited	
23D:					
Edneyville	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
23E:					
Edneyville	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
24D:					
Edneyville	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
24E:					
Edneyville	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
24F:					
Edneyville	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
25B:					
Elsinboro	90	Well suited		Well suited	
26B:					
Elsinboro	60	Well suited		Well suited	
Urban land	35	Not rated		Not rated	
27D:					
Evard	50	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
Cowee	35	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
28B:					
Glenelg	90	Well suited		Well suited	
28C:					
Glenelg	90	Well suited		Well suited	
28D:					
Glenelg	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
28E:					
Glenelg	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
28F:					
Glenelg	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
29C:					
Glenelg	90	Well suited		Well suited	
29D:					
Glenelg	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
29E:					
Glenelg	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
30C:					
Glenelg	60	Well suited		Well suited	
Urban land	35	Not rated		Not rated	
31D:					
Greenlee	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
31E:					
Greenlee	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
32A:					
Hatboro	90	Unsuited		Unsuited	
		Wetness	0.75	Wetness	1.00
33B:					
Hayesville	90	Well suited		Well suited	
33C:					
Hayesville	90	Well suited		Well suited	
33D:					
Hayesville	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
34B:					
Keener	90	Well suited		Well suited	
34C:					
Keener	90	Well suited		Well suited	
34D:					
Keener	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
35C:					
Keener	90	Well suited		Well suited	
35D:					
Keener	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
36A:					
Kinkora	90	Unsuited		Unsuited	
		Wetness	0.75	Wetness	1.00
37C:					
Konnarock	90	Poorly suited		Poorly suited	
		Rock fragments	0.50	Restrictive layer	0.50
37D:					
Konnarock	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Restrictive layer	0.50
37E:					
Konnarock	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
38C:					
McCamy	85	Well suited		Poorly suited	
				Restrictive layer	0.50
38D:					
McCamy	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
39D:					
McCamy	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
				Restrictive layer	0.50
39E:					
McCamy	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
				Restrictive layer	0.50
40D:					
Mt Rogers	45	Unsuited		Unsuited	
		Rock fragments	1.00	Rock fragments	1.00
		Slope	0.50	Slope	0.50

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
40D:					
Bloodyhorse---------	25	Unsuited		Unsuited	
		Rock fragments	1.00	Rock fragments	1.00
		Slope	0.50	Slope	0.50
Rock outcrop--------	15	Not rated		Not rated	
40F:					
Mt Rogers-----------	45	Unsuited		Unsuited	
		Rock fragments	1.00	Slope	1.00
		Slope	1.00	Rock fragments	1.00
Bloodyhorse---------	25	Unsuited		Unsuited	
		Rock fragments	1.00	Slope	1.00
		Slope	1.00	Rock fragments	1.00
Rock outcrop--------	15	Not rated		Not rated	
41C:					
Mt Rogers-----------	45	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
Buzzrock------------	40	Poorly suited		Well suited	
		Rock fragments	0.50		
41D:					
Mt Rogers-----------	45	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
Buzzrock------------	40	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50		
42C:					
Peaks---------------	90	Poorly suited		Poorly suited	
		Rock fragments	0.50	Restrictive layer	0.50
42D:					
Peaks---------------	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Restrictive layer	0.50
42E:					
Peaks---------------	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
43C:					
Peaks---------------	90	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
				Restrictive layer	0.50
43D:					
Peaks---------------	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
				Restrictive layer	0.50

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
43E:					
Peaks----------------	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
				Restrictive layer	0.50
43F:					
Peaks----------------	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
				Restrictive layer	0.50
44C:					
Pigeonroost----------	85	Well suited		Well suited	
44D:					
Pigeonroost----------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
44E:					
Pigeonroost----------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
45D:					
Pigeonroost----------	85	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
45E:					
Pigeonroost----------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
46E:					
Pigeonroost----------	60	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
Rock outcrop---------	30	Not rated		Not rated	
47D:					
Pineola--------------	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
48E:					
Pineola--------------	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
49:					
Pits, quarries-------	100	Not rated		Not rated	
50F:					
Rock outcrop---------	50	Not rated		Not rated	
Peaks----------------	40	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
51B:					
Scales---------------	95	Poorly suited		Unsuited	
		Rock fragments	0.50	Wetness	1.00
		Wetness	0.50		

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface)		Suitability for mechanical site preparation (deep)	
		Rating class and limiting features	Value	Rating class and limiting features	Value
52C:					
Sylco	50	Poorly suited		Poorly suited	
		Rock fragments	0.50	Restrictive layer	0.50
Sylvatus	35	Poorly suited		Unsuited	
		Rock fragments	0.50	Restrictive layer	1.00
52D:					
Sylco	50	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Restrictive layer	0.50
Sylvatus	35	Poorly suited		Unsuited	
		Slope	0.50	Restrictive layer	1.00
		Rock fragments	0.50	Slope	0.50
52E:					
Sylco	50	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	0.50
Sylvatus	35	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00
53B:					
Tate	90	Well suited		Well suited	
53C:					
Tate	90	Well suited		Well suited	
53D:					
Tate	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
53E:					
Tate	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
54C:					
Tate	90	Well suited		Well suited	
54D:					
Tate	90	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
54E:					
Tate	90	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
55D:					
Tate	90	Unsuited		Poorly suited	
		Rock fragments	1.00	Rock fragments	0.50
		Slope	0.50	Slope	0.50
56C:					
Thunder	80	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50

Table 9.—Forestland Management, Part IV—Continued

Map symbol and soil name	Pct. of map unit	Suitability for mechanical site preparation (surface): Rating class and limiting features	Value	Suitability for mechanical site preparation (deep): Rating class and limiting features	Value
56D:					
Thunder-------------	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
56E:					
Thunder-------------	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
57C:					
Thunder-------------	80	Poorly suited		Poorly suited	
		Rock fragments	0.50	Rock fragments	0.50
57D:					
Thunder-------------	80	Poorly suited		Poorly suited	
		Slope	0.50	Slope	0.50
		Rock fragments	0.50	Rock fragments	0.50
57E:					
Thunder-------------	80	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Rock fragments	0.50
58D:					
Udorthents----------	50	Not rated		Not rated	
Urban land----------	35	Not rated		Not rated	
59D:					
Unicoi--------------	85	Poorly suited		Unsuited	
		Rock fragments	0.50	Restrictive layer	1.00
		Slope	0.50	Rock fragments	0.50
				Slope	0.50
59E:					
Unicoi--------------	85	Unsuited		Unsuited	
		Slope	1.00	Slope	1.00
		Rock fragments	0.50	Restrictive layer	1.00
				Rock fragments	0.50
W:					
Water---------------	100	Not rated		Not rated	

Table 9.—Forestland Management, Part V

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Potential for damage to soil by fire: Value	Potential for seedling mortality: Rating class and limiting features	Potential for seedling mortality: Value
1C:					
Balsam	85	Low		Low	
		Texture/rock fragments	0.10		
1D:					
Balsam	85	Low		Low	
		Texture/rock fragments	0.10		
1E:					
Balsam	85	Low		Low	
		Texture/rock fragments	0.10		
2D:					
Balsam	70	Low		Low	
		Texture/rock fragments	0.10		
Nopan	20	Low		High	
		Texture/rock fragments	0.10	Wetness	1.00
2E:					
Balsam	70	Low		Low	
		Texture/rock fragments	0.10		
Nopan	20	Low		High	
		Texture/slope/ rock fragments	0.10	Wetness	1.00
3D:					
Bloodyhorse	80	Low		Low	
		Texture/rock fragments	0.10		
4F:					
Bloodyhorse	80	Low		Low	
		Texture/rock fragments	0.10		
5B:					
Braddock	90	Moderate		Low	
		Texture/rock fragments	0.50		
5C:					
Braddock	90	Moderate		Low	
		Texture/rock fragments	0.50		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
5D:					
Braddock------------	90	Moderate		Low	
		Texture/rock fragments	0.50		
6E:					
Braddock------------	90	Moderate		Low	
		Texture/slope/ rock fragments	0.50		
7D:					
Brevard-------------	50	Low		Low	
		Texture/rock fragments	0.10		
Greenlee------------	35	Low		Low	
		Texture/rock fragments	0.10		
8C:					
Burton--------------	90	Low		Low	
		Texture/rock fragments	0.10		
9D:					
Burton--------------	90	Low		Low	
		Texture/rock fragments	0.10		
9E:					
Burton--------------	90	Low		Low	
		Texture/rock fragments	0.10		
10D:					
Peaks---------------	20	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Chestnut------------	65	Low		Low	
		Texture/surface depth/rock fragments	0.10		
10E:					
Chestnut------------	65	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
Peaks---------------	20	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
11F:					
Chestnut------------	40	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
11F:					
Peaks	25	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
Tuckasegee	20	Low		Moderate	
		Texture/rock fragments	0.10	Available water	0.50
12A:					
Codorus	90	Low		Moderate	
		Texture/rock fragments	0.10	Wetness	0.50
13A:					
Comus	90	Low		Low	
		Texture/rock fragments	0.10		
14C:					
Cowee	90	Low		Low	
		Texture/rock fragments	0.10		
14D:					
Cowee	90	Low		Low	
		Texture/rock fragments	0.10		
14E:					
Cowee	90	Low		Low	
		Texture/slope/ rock fragments	0.10		
15D:					
Cowee	90	Low		Low	
		Texture/rock fragments	0.10		
15E:					
Cowee	90	Low		Low	
		Texture/slope/ rock fragments	0.10		
16D:					
Cowee	60	Low		Low	
		Texture/rock fragments	0.10		
Rock outcrop	35	Not rated		Not rated	
16E:					
Cowee	60	Low		Low	
		Texture/slope/ rock fragments	0.10		
Rock outcrop	35	Not rated		Not rated	

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
17A:					
Craigsville	85	Low		Low	
		Texture/rock fragments	0.10		
18C:					
Cullasaja	85	Low		Low	
		Texture/rock fragments	0.10		
18D:					
Cullasaja	85	Low		Low	
		Texture/rock fragments	0.10		
19A:					
Delanco	90	Low		Low	
		Texture/rock fragments	0.10		
19B:					
Delanco	90	Low		Low	
		Texture/rock fragments	0.10		
20C:					
Delanco	90	Low		Low	
		Texture/rock fragments	0.10		
21B:					
Edneytown	90	Low		Low	
		Texture/surface depth/rock fragments	0.10		
21C:					
Edneytown	90	Low		Low	
		Texture/surface depth/rock fragments	0.10		
21D:					
Edneytown	90	Low		Low	
		Texture/surface depth/rock fragments	0.10		
21E:					
Edneytown	90	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
21F:					
Edneytown	90	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
22C:					
Edneytown-----------	60	Low		Low	
		Texture/surface depth/rock fragments	0.10		
Urban land----------	35	Not rated		Not rated	
23C:					
Edneyville----------	90	Low		Low	
		Texture/rock fragments	0.10		
23D:					
Edneyville----------	90	Low		Low	
		Texture/rock fragments	0.10		
23E:					
Edneyville----------	90	Low		Low	
		Texture/slope/ rock fragments	0.10		
24D:					
Edneyville----------	90	Low		Low	
		Texture/rock fragments	0.10		
24E:					
Edneyville----------	90	Low		Low	
		Texture/slope/ rock fragments	0.10		
24F:					
Edneyville----------	90	Low		Low	
		Texture/slope/ rock fragments	0.10		
25B:					
Elsinboro-----------	90	Low		Low	
		Texture/rock fragments	0.10		
26B:					
Elsinboro-----------	60	Low		Low	
		Texture/rock fragments	0.10		
Urban land----------	35	Not rated		Not rated	
27D:					
Evard---------------	50	Low		Low	
		Texture/rock fragments	0.10		
Cowee---------------	35	Low		Low	
		Texture/rock fragments	0.10		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
28B:					
Glenelg-------------	90	Low		Low	
		Texture/surface depth/rock fragments	0.10		
28C:					
Glenelg-------------	90	Low		Low	
		Texture/surface depth/rock fragments	0.10		
28D:					
Glenelg-------------	90	Low		Low	
		Texture/surface depth/rock fragments	0.10		
28E:					
Glenelg-------------	90	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
28F:					
Glenelg-------------	90	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
29C:					
Glenelg-------------	90	Low		Low	
		Texture/surface depth/rock fragments	0.10		
29D:					
Glenelg-------------	90	Low		Low	
		Texture/surface depth/rock fragments	0.10		
29E:					
Glenelg-------------	90	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
30C:					
Glenelg-------------	60	Low		Low	
		Texture/surface depth/rock fragments	0.10		
Urban land----------	35	Not rated		Not rated	
31D:					
Greenlee------------	90	Low		Low	
		Texture/rock fragments	0.10		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
31E:					
Greenlee	90	Moderate		Low	
		Texture/slope/ rock fragments	0.50		
32A:					
Hatboro	90	Low		High	
		Texture/rock fragments	0.10	Wetness	1.00
33B:					
Hayesville	90	Moderate		Low	
		Texture/rock fragments	0.50		
33C:					
Hayesville	90	Moderate		Low	
		Texture/rock fragments	0.50		
33D:					
Hayesville	90	Moderate		Low	
		Texture/rock fragments	0.50		
34B:					
Keener	90	Low		Low	
		Texture/rock fragments	0.10		
34C:					
Keener	90	Low		Low	
		Texture/rock fragments	0.10		
34D:					
Keener	90	Low		Low	
		Texture/rock fragments	0.10		
35C:					
Keener	90	Low		Low	
		Texture/rock fragments	0.10		
35D:					
Keener	90	Low		Low	
		Texture/rock fragments	0.10		
36A:					
Kinkora	90	Low		High	
		Texture/rock fragments	0.10	Wetness	1.00
37C:					
Konnarock	90	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
37D:					
Konnarock-----------	90	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
37E:					
Konnarock-----------	90	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
38C:					
McCamy--------------	85	Low		Moderate	
		Texture/rock fragments	0.10	Soil reaction	0.50
38D:					
McCamy--------------	85	Low		Moderate	
		Texture/rock fragments	0.10	Soil reaction	0.50
39D:					
McCamy--------------	85	Low		Moderate	
		Texture/rock fragments	0.10	Soil reaction	0.50
39E:					
McCamy--------------	85	Low		Moderate	
		Texture/slope/ rock fragments	0.10	Soil reaction	0.50
40D:					
Mt Rogers-----------	45	Low		Low	
		Texture/rock fragments	0.10		
Bloodyhorse---------	25	Low		Low	
		Texture/rock fragments	0.10		
Rock outcrop--------	15	Not rated		Not rated	
40F:					
Mt Rogers-----------	45	Low		Low	
		Texture/rock fragments	0.10		
Bloodyhorse---------	25	Low		Low	
		Texture/rock fragments	0.10		
Rock outcrop--------	15	Not rated		Not rated	
41C:					
Mt Rogers-----------	45	Low		Low	
		Texture/rock fragments	0.10		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
41C:					
Buzzrock	40	Low		Low	
		Texture/rock fragments	0.10		
41D:					
Mt Rogers	45	Low		Low	
		Texture/rock fragments	0.10		
Buzzrock	40	Low		Low	
		Texture/rock fragments	0.10		
42C:					
Peaks	90	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
42D:					
Peaks	90	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
42E:					
Peaks	90	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
43C:					
Peaks	90	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
43D:					
Peaks	90	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
43E:					
Peaks	90	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
43F:					
Peaks	90	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
44C:					
Pigeonroost	85	Low		Low	
		Texture/rock fragments	0.10		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
44D:					
Pigeonroost	85	Low		Low	
		Texture/rock fragments	0.10		
44E:					
Pigeonroost	85	Low		Low	
		Texture/slope/ rock fragments	0.10		
45D:					
Pigeonroost	85	Low		Low	
		Texture/rock fragments	0.10		
45E:					
Pigeonroost	85	Low		Low	
		Texture/slope/ rock fragments	0.10		
46E:					
Pigeonroost	60	Low		Low	
		Texture/slope/ rock fragments	0.10		
Rock outcrop	30	Not rated		Not rated	
47D:					
Pineola	90	Low		Low	
		Texture/rock fragments	0.10		
48E:					
Pineola	90	Low		Low	
		Texture/rock fragments	0.10		
49:					
Pits, quarries	100	Not rated		Not rated	
50F:					
Rock outcrop	50	Not rated		Not rated	
Peaks	40	Moderate		Low	
		Texture/slope/ surface depth/ rock fragments	0.50		
51B:					
Scales	95	Low		High	
				Wetness	1.00
52C:					
Sylco	50	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
52C:					
Sylvatus	35	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
52D:					
Sylco	50	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
Sylvatus	35	Moderate		Low	
		Texture/surface depth/rock fragments	0.50		
52E:					
Sylco	50	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
Sylvatus	35	High		Low	
		Texture/slope/ surface depth/ rock fragments	1.00		
53B:					
Tate	90	Low		Low	
		Texture/rock fragments	0.10		
53C:					
Tate	90	Low		Low	
		Texture/rock fragments	0.10		
53D:					
Tate	90	Low		Low	
		Texture/rock fragments	0.10		
53E:					
Tate	90	Low		Low	
		Texture/slope/ rock fragments	0.10		
54C:					
Tate	90	Low		Low	
		Texture/rock fragments	0.10		
54D:					
Tate	90	Low		Low	
		Texture/rock fragments	0.10		

Table 9.—Forestland Management, Part V—Continued

Map symbol and soil name	Pct. of map unit	Potential for damage to soil by fire: Rating class and limiting features	Value	Potential for seedling mortality: Rating class and limiting features	Value
54E:					
Tate----------------	90	Low		Low	
		Texture/slope/ rock fragments	0.10		
55D:					
Tate----------------	90	Low		Low	
		Texture/rock fragments	0.10		
56C:					
Thunder-------------	80	Low		Low	
		Texture/rock fragments	0.10		
56D:					
Thunder-------------	80	Low		Low	
		Texture/rock fragments	0.10		
56E:					
Thunder-------------	80	Low		Low	
		Texture/slope/ rock fragments	0.10		
57C:					
Thunder-------------	80	Low		Low	
		Texture/rock fragments	0.10		
57D:					
Thunder-------------	80	Low		Low	
		Texture/rock fragments	0.10		
57E:					
Thunder-------------	80	Low		Low	
		Texture/slope/ rock fragments	0.10		
58D:					
Udorthents----------	50	Not rated		Not rated	
Urban land----------	35	Not rated		Not rated	
59D:					
Unitcoi-------------	85	Moderate		Moderate	
		Texture/rock fragments	0.50	Soil reaction	0.50
59E:					
Unicoi--------------	85	High		Moderate	
		Texture/slope/ rock fragments	1.00	Soil reaction	0.50
W:					
Water---------------	100	Not rated		Not rated	

Table 10.—Recreational Development, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
1C:							
Balsam	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.47	Large stones content	0.47	Slope	1.00
		Slope	0.04	Slope	0.04	Gravel content	0.70
						Large stones content	0.47
1D:							
Balsam	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Gravel content	0.70
						Large stones content	0.47
1E:							
Balsam	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Gravel content	0.70
						Large stones content	0.47
2D:							
Balsam	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Gravel content	0.70
						Large stones content	0.47
Nopan	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Depth to saturated zone	1.00
		Slope	1.00	Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
2E:							
Balsam	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Gravel content	0.70
						Large stones content	0.47
Nopan	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Depth to saturated zone	1.00
		Slope	1.00	Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	1.00	Slow water movement	1.00	Slow water movement	1.00
3D:							
Bloodyhorse	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.97	Gravel content	0.97	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
4F:							
Bloodyhorse	80	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.97	Gravel content	0.97	Slope	1.00
5B:							
Braddock	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
5C:							
Braddock	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
5D:							
Braddock	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
6E:							
Braddock	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
7D:							
Brevard	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Gravel content	1.00
		Gravel content	0.11	Gravel content	0.11	Large stones content	0.47
Greenlee	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Gravel content	0.73
						Large stones content	0.47
8C:							
Burton	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.63	Slope	0.63	Slope	1.00
						Depth to bedrock	0.80
						Gravel content	0.01
9D:							
Burton	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Depth to bedrock	0.80
						Large stones content	0.47
9E:							
Burton	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Depth to bedrock	0.80
						Large stones content	0.47

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
10D:							
Peaks----------------	20	Very limited		Very limited		Very limited	
		Gravel content	1.00	Gravel content	1.00	Gravel content	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.29
Chestnut------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.07	Gravel content	0.07	Gravel content	1.00
						Depth to bedrock	0.54
10E:							
Chestnut------------	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.07	Gravel content	0.07	Gravel content	1.00
						Depth to bedrock	0.54
Peaks----------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
						Depth to bedrock	0.29
11F:							
Chestnut------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.07	Gravel content	0.07	Gravel content	1.00
						Depth to bedrock	0.54
Peaks----------------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
						Depth to bedrock	0.29
Tuckasegee----------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.06	Gravel content	0.06	Gravel content	1.00
12A:							
Codorus-------------	90	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Depth to saturated zone	0.78	Flooding	1.00
		Depth to saturated zone	0.99	Flooding	0.40	Depth to saturated zone	0.99
13A:							
Comus---------------	90	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
		Too sandy	0.01	Too sandy	0.01	Too sandy	0.01
14C:							
Cowee---------------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
						Gravel content	0.56
						Depth to bedrock	0.01
14D:							
Cowee---------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.56
						Depth to bedrock	0.01

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
14E:							
Cowee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.56
						Depth to bedrock	0.01
15D:							
Cowee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.61	Gravel content	0.61	Gravel content	1.00
						Depth to bedrock	0.01
15E:							
Cowee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.61	Gravel content	0.61	Gravel content	1.00
						Depth to bedrock	0.01
16D:							
Cowee	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.56
						Depth to bedrock	0.01
Rock outcrop	35	Not rated		Not rated		Not rated	
16E:							
Cowee	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.56
						Depth to bedrock	0.01
Rock outcrop	35	Not rated		Not rated		Not rated	
17A:							
Craigsville	85	Very limited		Somewhat limited		Very limited	
		Flooding	1.00	Flooding	0.40	Flooding	1.00
						Gravel content	0.97
18C:							
Cullasaja	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.47	Large stones content	0.47	Slope	1.00
						Large stones	0.47
		Slope	0.37	Slope	0.37	content	0.47
						Gravel content	0.01
18D:							
Cullasaja	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
						Gravel content	0.01
19A:							
Delanco	90	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.48	Depth to saturated zone	0.81
		Depth to saturated zone	0.81	Slow water movement	0.26	Slow water movement	0.26
		Slow water movement	0.26			Gravel content	0.01

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
19B:							
Delanco	90	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Depth to saturated zone	0.48	Slope	0.88
		Depth to saturated zone	0.81	Slow water movement	0.26	Depth to saturated zone	0.81
		Slow water movement	0.26			Slow water movement	0.26
20C:							
Delanco	90	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.81	Depth to saturated zone	0.48	Slope	1.00
		Slope	0.37	Slope	0.37	Depth to saturated zone	0.81
		Slow water movement	0.26	Slow water movement	0.26	Slow water movement	0.26
21B:							
Edneytown	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
21C:							
Edneytown	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
21D:							
Edneytown	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
21E:							
Edneytown	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
21F:							
Edneytown	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
22C:							
Edneytown	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
Urban land	35	Not rated		Not rated		Not rated	
23C:							
Edneyville	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
23D:							
Edneyville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
23E:							
Edneyville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
24D:							
Edneyville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Large stones content	0.53

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
24E:							
Edneyville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Large stones content	0.53
24F:							
Edneyville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Large stones content	0.53
25B:							
Elsinboro-----------	90	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Too sandy	0.01	Slope	0.88
		Too sandy	0.01			Too sandy	0.01
26B:							
Elsinboro-----------	60	Very limited		Somewhat limited		Somewhat limited	
		Flooding	1.00	Too sandy	0.01	Slope	0.50
		Too sandy	0.01			Too sandy	0.01
Urban land----------	35	Not rated		Not rated		Not rated	
27D:							
Evard---------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.05	Gravel content	0.05	Gravel content	1.00
Cowee---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.61	Gravel content	0.61	Gravel content	1.00
						Depth to bedrock	0.01
28B:							
Glenelg-------------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
28C:							
Glenelg-------------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
28D:							
Glenelg-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
28E:							
Glenelg-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
28F:							
Glenelg-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
29C:							
Glenelg-------------	90	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.79	Gravel content	0.79	Gravel content	1.00
		Large stones content	0.53	Large stones content	0.53	Slope	1.00
		Slope	0.37	Slope	0.37	Large stones content	0.53

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
29D:							
Glenelg	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.79	Gravel content	0.79	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Large stones content	0.53
29E:							
Glenelg	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.79	Gravel content	0.79	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Large stones content	0.53
30C:							
Glenelg	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
Urban land	35	Not rated		Not rated		Not rated	
31D:							
Greenlee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Gravel content	0.73
						Large stones content	0.53
31E:							
Greenlee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Gravel content	0.73
						Large stones content	0.53
32A:							
Hatboro	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Ponding	1.00	Flooding	0.40	Ponding	1.00
33B:							
Hayesville	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
33C:							
Hayesville	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
33D:							
Hayesville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
34B:							
Keener	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
34C:							
Keener	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
34D:							
Keener	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
35C:							
Keener	90	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.47	Large stones content	0.47	Slope	1.00
		Slope	0.37	Slope	0.37	Large stones content	0.47
35D:							
Keener	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
36A:							
Kinkora	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Flooding	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Slow water movement	0.96	Slow water movement	0.96
37C:							
Konnarock	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Depth to bedrock	0.95
37D:							
Konnarock	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Depth to bedrock	0.95
37E:							
Konnarock	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Depth to bedrock	0.95
38C:							
McCamy	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
						Depth to bedrock	0.80
38D:							
McCamy	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.80
39D:							
McCamy	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Depth to bedrock	0.80
						Large stones content	0.47

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
39E:							
McCamy	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Depth to bedrock	0.80
						Large stones content	0.47
40D:							
Mt Rogers	45	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.89	Gravel content	0.89	Slope	1.00
Bloodyhorse	25	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.97	Gravel content	0.97	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
40F:							
Mt Rogers	45	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.89	Gravel content	0.89	Slope	1.00
Bloodyhorse	25	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.97	Gravel content	0.97	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
41C:							
Mt Rogers	45	Somewhat limited		Somewhat limited		Very limited	
		Gravel content	0.89	Gravel content	0.89	Gravel content	1.00
		Large stones content	0.47	Large stones content	0.47	Slope	1.00
		Slope	0.37	Slope	0.37	Large stones content	0.47
Buzzrock	40	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.47	Large stones content	0.47	Slope	1.00
		Slope	0.37	Slope	0.37	Gravel content	1.00
		Gravel content	0.03	Gravel content	0.03	Large stones content	0.47
41D:							
Mt Rogers	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	0.89	Gravel content	0.89	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
41D:							
Buzzrock------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Gravel content	1.00
		Gravel content	0.03	Gravel content	0.03	Large stones content	0.47
42C:							
Peaks---------------	90	Very limited		Very limited		Very limited	
		Gravel content	1.00	Gravel content	1.00	Gravel content	1.00
		Slope	0.37	Slope	0.37	Slope	1.00
						Depth to bedrock	0.29
42D:							
Peaks---------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
						Depth to bedrock	0.29
42E:							
Peaks---------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
						Depth to bedrock	0.29
43C:							
Peaks---------------	90	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Gravel content	1.00	Gravel content	1.00	Gravel content	1.00
		Slope	0.37	Slope	0.37	Slope	1.00
43D:							
Peaks---------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
43E:							
Peaks---------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
43F:							
Peaks---------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
44C:							
Pigeonroost---------	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
						Depth to bedrock	0.03

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
44D:							
Pigeonroost---------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.03
44E:							
Pigeonroost---------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.03
45D:							
Pigeonroost---------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Gravel content	1.00
		Gravel content	0.10	Gravel content	0.10	Large stones content	0.53
45E:							
Pigeonroost---------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Gravel content	1.00
		Gravel content	0.10	Gravel content	0.10	Large stones content	0.53
46E:							
Pigeonroost---------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.03
Rock outcrop--------	30	Not rated		Not rated		Not rated	
47D:							
Pineola-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.54
						Gravel content	0.44
48E:							
Pineola-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Depth to bedrock	0.54
						Large stones content	0.53
49:							
Pits, quarries------	100	Not rated		Not rated		Not rated	
50F:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Peaks---------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
						Depth to bedrock	0.29
51B:							
Scales--------------	95	Not rated		Not rated		Not rated	

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Value	Picnic areas: Rating class and limiting features	Value	Playgrounds: Rating class and limiting features	Value
52C:							
Sylco	50	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Depth to bedrock	0.71
Sylvatus	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Slope	0.37	Slope	0.37	Depth to bedrock	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
52D:							
Sylco	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Depth to bedrock	0.71
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
52E:							
Sylco	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
						Depth to bedrock	0.71
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Gravel content	0.01	Gravel content	0.01	Gravel content	1.00
53B:							
Tate	90	Not limited		Not limited		Somewhat limited	
						Slope	0.88
53C:							
Tate	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
53D:							
Tate	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
53E:							
Tate	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
54C:							
Tate	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
54D:							
Tate	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
54E:							
Tate	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
55D:							
Tate	90	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
56C:							
Thunder	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
						Gravel content	0.12
56D:							
Thunder	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.12
56E:							
Thunder	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.12
57C:							
Thunder	80	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.47	Large stones content	0.47	Slope	1.00
		Slope	0.37	Slope	0.37	Large stones content	0.47
						Gravel content	0.12
57D:							
Thunder	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
						Gravel content	0.12
57E:							
Thunder	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.47
						Gravel content	0.12
58D:							
Udorthents	50	Not rated		Not rated		Not rated	
Urban land	35	Not rated		Not rated		Not rated	
59D:							
Unicoi	85	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Large stones content	1.00
		Gravel content	1.00	Gravel content	1.00	Gravel content	1.00
		Slope	1.00	Slope	1.00	Slope	1.00

Table 10.—Recreational Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Camp areas: Rating class and limiting features	Camp areas: Value	Picnic areas: Rating class and limiting features	Picnic areas: Value	Playgrounds: Rating class and limiting features	Playgrounds: Value
59E:							
Unicoi	85	Very limited		Very limited		Very limited	
		Slope	1.00	Large stones content	1.00	Large stones content	1.00
		Large stones content	1.00	Slope	1.00	Gravel content	1.00
		Gravel content	1.00	Gravel content	1.00	Slope	1.00
W:							
Water	100	Not rated		Not rated		Not rated	

Table 10.—Recreational Development, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Paths and trails		Off-road motorcycle trails		Golf fairways	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1C:							
Balsam	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.47	Large stones content	0.47	Large stones content	1.00
						Slope	0.04
1D:							
Balsam	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.47	Slope	1.00
		Large stones content	0.47			Large stones content	1.00
1E:							
Balsam	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	1.00
2D:							
Balsam	70	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.47	Slope	1.00
		Large stones content	0.47			Large stones content	1.00
Nopan	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Large stones content	0.47	Depth to saturated zone	1.00
		Large stones content	0.47			Large stones content	0.26
2E:							
Balsam	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	1.00
Nopan	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to saturated zone	1.00
3D:							
Bloodyhorse	80	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.68	Large stones content	0.47	Slope	1.00
		Large stones content	0.47			Gravel content	0.97
						Droughty	0.24
4F:							
Bloodyhorse	80	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Gravel content	0.97
						Droughty	0.24

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
5B:							
Braddock	90	Not limited		Not limited		Not limited	
5C:							
Braddock	90	Not limited		Not limited		Somewhat limited	
						Slope	0.37
5D:							
Braddock	90	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
6E:							
Braddock	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.22	Slope	1.00
						Large stones content	0.88
7D:							
Brevard	50	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.47	Large stones content	0.47	Slope	1.00
		Slope	0.08			Large stones content	0.16
						Gravel content	0.11
Greenlee	35	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.47	Large stones content	0.47	Large stones content	1.00
		Slope	0.08			Slope	1.00
						Droughty	0.02
8C:							
Burton	90	Not limited		Not limited		Somewhat limited	
						Depth to bedrock	0.80
						Slope	0.63
9D:							
Burton	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.47	Slope	1.00
		Large stones content	0.47			Depth to bedrock	0.80
9E:							
Burton	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Depth to bedrock	0.80
10D:							
Peaks	20	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Gravel content	1.00
						Droughty	1.00
						Slope	1.00
Chestnut	65	Somewhat limited		Not limited		Very limited	
		Slope	0.08			Slope	1.00
						Depth to bedrock	0.54
						Gravel content	0.07

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
10E:							
Chestnut	65	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.78	Slope	1.00
						Depth to bedrock	0.54
						Gravel content	0.07
Peaks	20	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.78	Slope	1.00
						Gravel content	1.00
						Droughty	1.00
11F:							
Chestnut	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.54
						Gravel content	0.07
Peaks	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
						Droughty	1.00
Tuckasegee	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.06
12A:							
Codorus	90	Somewhat limited		Somewhat limited		Very limited	
		Depth to saturated zone	0.50	Depth to saturated zone	0.50	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	0.78
13A:							
Comus	90	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
		Too sandy	0.01	Too sandy	0.01		
14C:							
Cowee	90	Not limited		Not limited		Somewhat limited	
						Slope	0.37
						Depth to bedrock	0.01
14D:							
Cowee	90	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.01
14E:							
Cowee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.01
15D:							
Cowee	90	Somewhat limited		Not limited		Very limited	
		Slope	0.68			Slope	1.00
						Gravel content	0.61
						Droughty	0.16

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
15E:							
Cowee----------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	0.61
						Droughty	0.16
16D:							
Cowee----------------	60	Somewhat limited		Not limited		Very limited	
		Slope	0.68			Slope	1.00
						Depth to bedrock	0.01
Rock outcrop---------	35	Not rated		Not rated		Not rated	
16E:							
Cowee----------------	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.01
Rock outcrop---------	35	Not rated		Not rated		Not rated	
17A:							
Craigsville----------	85	Somewhat limited		Somewhat limited		Very limited	
		Flooding	0.40	Flooding	0.40	Flooding	1.00
						Large stones content	0.84
						Droughty	0.44
18C:							
Cullasaja------------	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.99
						Slope	0.37
18D:							
Cullasaja------------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.47	Slope	1.00
		Large stones content	0.47			Large stones content	0.99
19A:							
Delanco--------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.11	Depth to saturated zone	0.11	Depth to saturated zone	0.48
19B:							
Delanco--------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.11	Depth to saturated zone	0.11	Depth to saturated zone	0.48
20C:							
Delanco--------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Depth to saturated zone	0.11	Depth to saturated zone	0.11	Depth to saturated zone	0.48
						Slope	0.37
21B:							
Edneytown------------	90	Not limited		Not limited		Not limited	

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
21C:							
Edneytown-----------	90	Very limited		Very limited		Somewhat limited	
		Water erosion	1.00	Water erosion	1.00	Slope	0.37
21D:							
Edneytown-----------	90	Very limited		Very limited		Very limited	
		Water erosion	1.00	Water erosion	1.00	Slope	1.00
		Slope	0.50				
21E:							
Edneytown-----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	0.22		
21F:							
Edneytown-----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Water erosion	1.00	Slope	1.00
		Water erosion	1.00	Slope	1.00		
22C:							
Edneytown-----------	60	Not limited		Not limited		Somewhat limited	
						Slope	0.01
Urban land----------	35	Not rated		Not rated		Not rated	
23C:							
Edneyville----------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.37
23D:							
Edneyville----------	90	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
23E:							
Edneyville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
24D:							
Edneyville----------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.53	Slope	1.00
		Large stones content	0.53				
24E:							
Edneyville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53		
24F:							
Edneyville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53		
25B:							
Elsinboro-----------	90	Somewhat limited		Somewhat limited		Not limited	
		Too sandy	0.01	Too sandy	0.01		

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
26B:							
Elsinboro-----------	60	Somewhat limited		Somewhat limited		Not limited	
		Too sandy	0.01	Too sandy	0.01		
Urban land----------	35	Not rated		Not rated		Not rated	
27D:							
Evard---------------	50	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Gravel content	0.05
Cowee---------------	35	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
						Gravel content	0.61
						Droughty	0.16
28B:							
Glenelg-------------	90	Not limited		Not limited		Not limited	
28C:							
Glenelg-------------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.37
28D:							
Glenelg-------------	90	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
28E:							
Glenelg-------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.22	Slope	1.00
28F:							
Glenelg-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
29C:							
Glenelg-------------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.53	Large stones content	0.53	Gravel content	0.79
						Slope	0.37
29D:							
Glenelg-------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.53	Slope	1.00
		Large stones content	0.53			Gravel content	0.79
29E:							
Glenelg-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Gravel content	0.79
30C:							
Glenelg-------------	60	Not limited		Not limited		Somewhat limited	
						Slope	0.01
Urban land----------	35	Not rated		Not rated		Not rated	

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
31D:							
Greenlee	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.53	Slope	1.00
		Large stones content	0.53			Large stones content	1.00
						Droughty	0.02
31E:							
Greenlee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Large stones content	1.00
						Droughty	0.02
32A:							
Hatboro	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Flooding	1.00
		Flooding	0.40	Flooding	0.40	Depth to saturated zone	1.00
33B:							
Hayesville	90	Not limited		Not limited		Not limited	
33C:							
Hayesville	90	Not limited		Not limited		Somewhat limited	
						Slope	0.37
33D:							
Hayesville	90	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
34B:							
Keener	90	Not limited		Not limited		Not limited	
34C:							
Keener	90	Not limited		Not limited		Somewhat limited	
						Slope	0.37
34D:							
Keener	90	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
35C:							
Keener	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.47	Large stones content	0.47	Slope	0.37
35D:							
Keener	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.47	Slope	1.00
		Large stones content	0.47				
36A:							
Kinkora	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Ponding	1.00
		Ponding	1.00	Ponding	1.00	Depth to saturated zone	1.00

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
37C:							
Konnarock-----------	90	Not limited		Not limited		Somewhat limited	
						Depth to bedrock	0.95
						Droughty	0.79
						Slope	0.37
37D:							
Konnarock-----------	90	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.95
						Droughty	0.79
37E:							
Konnarock-----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.95
						Droughty	0.79
38C:							
McCamy--------------	85	Not limited		Not limited		Somewhat limited	
						Depth to bedrock	0.80
						Droughty	0.54
						Slope	0.37
38D:							
McCamy--------------	85	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.80
						Droughty	0.54
39D:							
McCamy--------------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.47	Slope	1.00
		Large stones content	0.47			Depth to bedrock	0.80
						Droughty	0.54
39E:							
McCamy--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Depth to bedrock	0.80
						Droughty	0.54
40D:							
Mt Rogers-----------	45	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	0.89
		Slope	0.68			Large stones content	0.08
Bloodyhorse---------	25	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	0.97
		Slope	0.68			Droughty	0.24
Rock outcrop--------	15	Not rated		Not rated		Not rated	

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
40F:							
Mt Rogers-----------	45	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	0.89
		Slope	1.00	Slope	1.00	Large stones content	0.08
Bloodyhorse---------	25	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	0.97
		Slope	1.00	Slope	1.00	Droughty	0.24
Rock outcrop--------	15	Not rated		Not rated		Not rated	
41C:							
Mt Rogers-----------	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.47	Large stones content	0.47	Gravel content	0.89
						Slope	0.37
						Large stones content	0.08
Buzzrock------------	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.47	Large stones content	0.47	Droughty	0.66
						Slope	0.37
						Gravel content	0.03
41D:							
Mt Rogers-----------	45	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.47	Slope	1.00
		Large stones content	0.47			Gravel content	0.89
						Large stones content	0.08
Buzzrock------------	40	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.47	Slope	1.00
		Large stones content	0.47			Droughty	0.66
						Gravel content	0.03
42C:							
Peaks---------------	90	Not limited		Not limited		Very limited	
						Gravel content	1.00
						Droughty	1.00
						Slope	0.37
42D:							
Peaks---------------	90	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Gravel content	1.00
						Droughty	1.00
42E:							
Peaks---------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
						Droughty	1.00

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
43C:							
Peaks	90	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Gravel content	1.00
						Droughty	1.00
						Slope	0.37
43D:							
Peaks	90	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	1.00
		Slope	1.00			Droughty	1.00
43E:							
Peaks	90	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
43F:							
Peaks	90	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Gravel content	1.00
		Slope	1.00	Slope	1.00	Droughty	1.00
44C:							
Pigeonroost	85	Not limited		Not limited		Somewhat limited	
						Slope	0.37
						Depth to bedrock	0.03
44D:							
Pigeonroost	85	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.03
44E:							
Pigeonroost	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.03
45D:							
Pigeonroost	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.68	Large stones content	0.53	Slope	1.00
		Large stones content	0.53			Gravel content	0.10
						Depth to bedrock	0.03
45E:							
Pigeonroost	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Gravel content	0.10
						Depth to bedrock	0.03
46E:							
Pigeonroost	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.03
Rock outcrop	30	Not rated		Not rated		Not rated	

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Value	Off-road motorcycle trails: Rating class and limiting features	Value	Golf fairways: Rating class and limiting features	Value
47D:							
Pineola-------------	90	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.54
						Droughty	0.01
48E:							
Pineola-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.53	Large stones content	0.53	Depth to bedrock	0.54
						Droughty	0.01
49:							
Pits, quarries------	100	Not rated		Not rated		Not rated	
50F:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Peaks---------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Gravel content	1.00
						Droughty	1.00
51B:							
Scales--------------	95	Not rated		Not rated		Not rated	
52C:							
Sylco---------------	50	Not limited		Not limited		Somewhat limited	
						Depth to bedrock	0.71
						Droughty	0.58
						Slope	0.37
Sylvatus------------	35	Not limited		Not limited		Very limited	
						Depth to bedrock	1.00
						Droughty	1.00
						Slope	0.37
52D:							
Sylco---------------	50	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Depth to bedrock	0.71
						Droughty	0.58
Sylvatus------------	35	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Depth to bedrock	1.00
						Droughty	1.00
52E:							
Sylco---------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	0.71
						Droughty	0.58
Sylvatus------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Depth to bedrock	1.00
						Droughty	1.00

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Paths and trails: Value	Off-road motorcycle trails: Rating class and limiting features	Off-road motorcycle trails: Value	Golf fairways: Rating class and limiting features	Golf fairways: Value
53B:							
Tate	90	Not limited		Not limited		Not limited	
53C:							
Tate	90	Not limited		Not limited		Somewhat limited	
						Slope	0.37
53D:							
Tate	90	Somewhat limited		Not limited		Very limited	
		Slope	0.50			Slope	1.00
53E:							
Tate	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Slope	0.22	Slope	1.00
54C:							
Tate	90	Not limited		Not limited		Somewhat limited	
						Slope	0.37
54D:							
Tate	90	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
54E:							
Tate	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
55D:							
Tate	90	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
		Slope	0.68				
56C:							
Thunder	80	Not limited		Not limited		Somewhat limited	
						Large stones content	0.68
						Slope	0.37
56D:							
Thunder	80	Very limited		Not limited		Very limited	
		Slope	1.00			Slope	1.00
						Large stones content	0.68
56E:							
Thunder	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
						Large stones content	0.68
57C:							
Thunder	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.68
						Slope	0.37

Table 10.—Recreational Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Paths and trails: Rating class and limiting features	Paths and trails: Value	Off-road motorcycle trails: Rating class and limiting features	Off-road motorcycle trails: Value	Golf fairways: Rating class and limiting features	Golf fairways: Value
57D:							
Thunder	80	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Large stones content	0.47	Slope	1.00
		Large stones content	0.47			Large stones content	0.68
57E:							
Thunder	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.47	Large stones content	0.47	Large stones content	0.68
58D:							
Udorthents	50	Not rated		Not rated		Not rated	
Urban land	35	Not rated		Not rated		Not rated	
59D:							
Unicoi	85	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Droughty	1.00
						Depth to bedrock	1.00
		Slope	0.68			Gravel content	1.00
59E:							
Unicoi	85	Very limited		Very limited		Very limited	
		Large stones content	1.00	Large stones content	1.00	Slope	1.00
						Droughty	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
W:							
Water	100	Not rated		Not rated		Not rated	

Table 11.—Building Site Development, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
1C:							
Balsam--------------	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.84	Large stones content	0.84	Slope	1.00
		Slope	0.04	Slope	0.04	Large stones content	0.84
1D:							
Balsam--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.84	Large stones content	0.84	Large stones content	0.84
1E:							
Balsam--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.84	Large stones content	0.84	Large stones content	0.84
2D:							
Balsam--------------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.84	Large stones content	0.84	Large stones content	0.84
Nopan---------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
2E:							
Balsam--------------	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.84	Large stones content	0.84	Large stones content	0.84
Nopan---------------	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
3D:							
Bloodyhorse---------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.03	Slope	1.00	Depth to hard bedrock	0.03
4F:							
Bloodyhorse---------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.03	Depth to hard bedrock	1.00	Depth to hard bedrock	0.03

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
5B:							
Braddock	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
						Slope	0.12
5C:							
Braddock	90	Somewhat limited		Somewhat limited		Very limited	
		Shrink-swell	0.50	Shrink-swell	0.50	Slope	1.00
		Slope	0.37	Slope	0.37	Shrink-swell	0.50
5D:							
Braddock	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
6E:							
Braddock	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
7D:							
Brevard	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Greenlee	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.99	Large stones content	0.99	Large stones content	0.99
8C:							
Burton	90	Somewhat limited		Very limited		Very limited	
		Slope	0.63	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.35	Depth to soft bedrock	0.79	Depth to hard bedrock	0.35
				Slope	0.63		
9D:							
Burton	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.35	Depth to hard bedrock	1.00	Depth to hard bedrock	0.35
				Depth to soft bedrock	0.79		
9E:							
Burton	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.35	Depth to hard bedrock	1.00	Depth to hard bedrock	0.35
				Depth to soft bedrock	0.79		
10D:							
Peaks	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Slope	1.00	Depth to hard bedrock	0.29

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
10D:							
Chestnut	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.84		
				Depth to soft bedrock	0.54		
10E:							
Chestnut	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.84		
				Depth to soft bedrock	0.54		
Peaks	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Depth to hard bedrock	1.00	Depth to hard bedrock	0.29
11F:							
Chestnut	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to hard bedrock	0.84		
				Depth to soft bedrock	0.54		
Peaks	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Depth to hard bedrock	1.00	Depth to hard bedrock	0.29
Tuckasegee	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
12A:							
Codorus	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.99	Depth to saturated zone	1.00	Depth to saturated zone	0.99
13A:							
Comus	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
14C:							
Cowee	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
				Depth to soft bedrock	0.01		
14D:							
Cowee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.01		

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
14E:							
Cowee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.01		
15D:							
Cowee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.01		
15E:							
Cowee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.01		
16D:							
Cowee	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.01		
Rock outcrop	35	Not rated		Not rated		Not rated	
16E:							
Cowee	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.01		
Rock outcrop	35	Not rated		Not rated		Not rated	
17A:							
Craigsville	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Large stones content	0.41	Large stones content	0.41	Large stones content	0.41
18C:							
Cullasaja	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.88	Large stones content	0.88	Slope	1.00
		Slope	0.37	Slope	0.37	Large stones content	0.88
18D:							
Cullasaja	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.88	Large stones content	0.88	Large stones content	0.88
19A:							
Delanco	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.81	Depth to saturated zone	1.00	Depth to saturated zone	0.81
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
19B:							
Delanco	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	0.81	Depth to saturated zone	1.00	Depth to saturated zone	0.81
		Shrink-swell	0.50	Shrink-swell	0.50	Shrink-swell	0.50
20C:							
Delanco	90	Somewhat limited		Very limited		Very limited	
		Depth to saturated zone	0.81	Depth to saturated zone	1.00	Slope	1.00
		Shrink-swell	0.50	Shrink-swell	0.50	Depth to saturated zone	0.81
		Slope	0.37	Slope	0.37	Shrink-swell	0.50
21B:							
Edneytown	90	Not limited		Not limited		Somewhat limited	
						Slope	0.12
21C:							
Edneytown	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
21D:							
Edneytown	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
21E:							
Edneytown	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
21F:							
Edneytown	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
22C:							
Edneytown	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
Urban land	35	Not rated		Not rated		Not rated	
23C:							
Edneyville	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
23D:							
Edneyville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
23E:							
Edneyville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
24D:							
Edneyville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
24E:							
Edneyville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
24F:							
Edneyville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
25B:							
Elsinboro-----------	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
						Slope	0.12
26B:							
Elsinboro-----------	60	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Flooding	1.00
Urban land----------	35	Not rated		Not rated		Not rated	
27D:							
Evard---------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
Cowee---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.01		
28B:							
Glenelg-------------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.12
28C:							
Glenelg-------------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
28D:							
Glenelg-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
28E:							
Glenelg-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
28F:							
Glenelg-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
29C:							
Glenelg-------------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
29D:							
Glenelg-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
29E:							
Glenelg-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
30C:							
Glenelg-------------	60	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.01	Slope	0.01	Slope	1.00
Urban land----------	35	Not rated		Not rated		Not rated	

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
31D:							
Greenlee------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.99	Large stones content	0.99	Large stones content	0.99
31E:							
Greenlee------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.99	Large stones content	0.99	Large stones content	0.99
32A:							
Hatboro-------------	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
33B:							
Hayesville----------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.12
33C:							
Hayesville----------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
33D:							
Hayesville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
34B:							
Keener--------------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.12
34C:							
Keener--------------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
34D:							
Keener--------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
35C:							
Keener--------------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
35D:							
Keener--------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
36A:							
Kinkora-------------	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Flooding	1.00	Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
37C:							
Konnarock	90	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.95	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.37	Slope	0.37	Depth to hard bedrock	0.95
37D:							
Konnarock	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.95	Depth to hard bedrock	1.00	Depth to hard bedrock	0.95
37E:							
Konnarock	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.95	Depth to hard bedrock	1.00	Depth to hard bedrock	0.95
38C:							
McCamy	85	Somewhat limited		Very limited		Very limited	
		Slope	0.37	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.35	Depth to soft bedrock	0.79	Depth to hard bedrock	0.35
				Slope	0.37		
38D:							
McCamy	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.35	Depth to hard bedrock	1.00	Depth to hard bedrock	0.35
				Depth to soft bedrock	0.79		
39D:							
McCamy	85	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.35	Slope	1.00	Depth to hard bedrock	0.35
				Depth to soft bedrock	0.79		
39E:							
McCamy	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.35	Depth to hard bedrock	1.00	Depth to hard bedrock	0.35
				Depth to soft bedrock	0.79		
40D:							
Mt Rogers	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.01	Large stones content	0.01	Large stones content	0.01
Bloodyhorse	25	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.03	Slope	1.00	Depth to hard bedrock	0.03

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
40D:							
Rock outcrop	15	Not rated		Not rated		Not rated	
40F:							
Mt Rogers	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.01	Large stones content	0.01	Large stones content	0.01
Bloodyhorse	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.03	Depth to hard bedrock	1.00	Depth to hard bedrock	0.03
Rock outcrop	15	Not rated		Not rated		Not rated	
41C:							
Mt Rogers	45	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
		Large stones content	0.01	Large stones content	0.01	Large stones content	0.01
Buzzrock	40	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Depth to hard bedrock	0.96	Slope	1.00
		Large stones content	0.09	Slope	0.37	Large stones content	0.09
				Large stones content	0.09		
41D:							
Mt Rogers	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.01	Large stones content	0.01	Large stones content	0.01
Buzzrock	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.09	Depth to hard bedrock	0.96	Large stones content	0.09
				Large stones content	0.09		
42C:							
Peaks	90	Somewhat limited		Very limited		Very limited	
		Slope	0.37	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Slope	0.37	Depth to hard bedrock	0.29
42D:							
Peaks	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Depth to hard bedrock	1.00	Depth to hard bedrock	0.29
42E:							
Peaks	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Depth to hard bedrock	1.00	Depth to hard bedrock	0.29

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
43C:							
Peaks	90	Somewhat limited		Very limited		Very limited	
		Slope	0.37	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Slope	0.37	Depth to hard bedrock	0.29
43D:							
Peaks	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Depth to hard bedrock	1.00	Depth to hard bedrock	0.29
43E:							
Peaks	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Depth to hard bedrock	1.00	Depth to hard bedrock	0.29
43F:							
Peaks	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Depth to hard bedrock	1.00	Depth to hard bedrock	0.29
44C:							
Pigeonroost	85	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
				Depth to soft bedrock	0.03		
44D:							
Pigeonroost	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.03		
44E:							
Pigeonroost	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.03		
45D:							
Pigeonroost	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.03		
45E:							
Pigeonroost	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.03		
46E:							
Pigeonroost	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.03		
Rock outcrop	30	Not rated		Not rated		Not rated	

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
47D:							
Pineola	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.54		
48E:							
Pineola	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
				Depth to soft bedrock	0.54		
49:							
Pits, quarries	100	Not rated		Not rated		Not rated	
50F:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Peaks	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.29	Depth to hard bedrock	1.00	Depth to hard bedrock	0.29
51B:							
Scales	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
52C:							
Sylco	50	Somewhat limited		Very limited		Very limited	
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Slope	1.00
		Slope	0.37	Slope	0.37	Depth to hard bedrock	0.71
Sylvatus	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.37	Slope	0.37	Slope	1.00
52D:							
Sylco	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Depth to hard bedrock	0.71
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
52E:							
Sylco	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Depth to hard bedrock	0.71
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
53B:							
Tate----------------	90	Not limited		Not limited		Somewhat limited	
						Slope	0.12
53C:							
Tate----------------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
53D:							
Tate----------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
53E:							
Tate----------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
54C:							
Tate----------------	90	Somewhat limited		Somewhat limited		Very limited	
		Slope	0.37	Slope	0.37	Slope	1.00
54D:							
Tate----------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
54E:							
Tate----------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
55D:							
Tate----------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
56C:							
Thunder-------------	80	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.42	Large stones content	0.42	Slope	1.00
		Slope	0.37	Slope	0.37	Large stones content	0.42
56D:							
Thunder-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.42	Large stones content	0.42	Large stones content	0.42
56E:							
Thunder-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.42	Large stones content	0.42	Large stones content	0.42
57C:							
Thunder-------------	80	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.42	Large stones content	0.42	Slope	1.00
		Slope	0.37	Slope	0.37	Large stones content	0.42
57D:							
Thunder-------------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.42	Large stones content	0.42	Large stones content	0.42

Table 11.—Building Site Development, Part I—Continued

Map symbol and soil name	Pct. of map unit	Dwellings without basements: Rating class and limiting features	Value	Dwellings with basements: Rating class and limiting features	Value	Small commercial buildings: Rating class and limiting features	Value
57E:							
Thunder	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.42	Large stones content	0.42	Large stones content	0.42
58D:							
Udorthents	50	Not rated		Not rated		Not rated	
Urban land	35	Not rated		Not rated		Not rated	
59D:							
Unicoi	85	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
59E:							
Unicoi	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to hard bedrock	1.00
W:							
Water	100	Not rated		Not rated		Not rated	

Table 11.—Building Site Development, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
1C:							
Balsam	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.84	Large stones content	0.84	Large stones content	1.00
		Frost action	0.50	Cutbanks cave	0.10	Slope	0.04
		Slope	0.04	Slope	0.04		
1D:							
Balsam	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.84	Large stones content	0.84	Large stones content	1.00
		Frost action	0.50	Cutbanks cave	0.10		
1E:							
Balsam	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.84	Large stones content	0.84	Large stones content	1.00
		Frost action	0.50	Cutbanks cave	0.10		
2D:							
Balsam	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.84	Large stones content	0.84	Large stones content	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Nopan	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	1.00	Large stones content	0.26
2E:							
Balsam	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.84	Large stones content	0.84	Large stones content	1.00
		Frost action	0.50	Cutbanks cave	0.10		
Nopan	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	1.00	Large stones content	0.26
3D:							
Bloodyhorse	80	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.97
		Depth to hard bedrock	0.03	Slope	1.00	Droughty	0.24

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
4F:							
Bloodyhorse	80	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	0.97
		Depth to hard bedrock	0.03	Cutbanks cave	1.00	Droughty	0.24
5B:							
Braddock	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Too clayey	0.12		
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Frost action	0.50				
5C:							
Braddock	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Shrink-swell	0.50	Too clayey	0.12		
		Frost action	0.50	Cutbanks cave	0.10		
5D:							
Braddock	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	0.12		
		Shrink-swell	0.50	Cutbanks cave	0.10		
6E:							
Braddock	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Too clayey	0.12	Large stones content	0.88
		Shrink-swell	0.50	Cutbanks cave	0.10		
7D:							
Brevard	50	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Large stones content	0.16
						Gravel content	0.11
Greenlee	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Large stones content	1.00
		Large stones content	0.99	Large stones content	0.99	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.02
8C:							
Burton	90	Somewhat limited		Very limited		Somewhat limited	
		Slope	0.63	Depth to hard bedrock	1.00	Depth to bedrock	0.80
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.63
		Depth to hard bedrock	0.35	Depth to soft bedrock	0.79		
9D:							
Burton	90	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Depth to bedrock	0.80
		Depth to hard bedrock	0.35	Cutbanks cave	1.00		

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
9E:							
Burton	90	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Depth to bedrock	0.80
		Depth to hard bedrock	0.35	Cutbanks cave	1.00		
10D:							
Peaks	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Gravel content	1.00
		Frost action	0.50	Cutbanks cave	1.00	Droughty	1.00
		Depth to hard bedrock	0.29	Slope	1.00	Slope	1.00
Chestnut	65	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Depth to bedrock	0.54
				Depth to hard bedrock	0.84	Gravel content	0.07
10E:							
Chestnut	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.54
				Depth to hard bedrock	0.84	Gravel content	0.07
Peaks	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	1.00
		Depth to hard bedrock	0.29	Cutbanks cave	1.00	Droughty	1.00
11F:							
Chestnut	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.54
				Depth to hard bedrock	0.84	Gravel content	0.07
Peaks	25	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	1.00
		Depth to hard bedrock	0.29	Cutbanks cave	1.00	Droughty	1.00
Tuckasegee	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.06
12A:							
Codorus	90	Very limited		Very limited		Very limited	
		Frost action	1.00	Depth to saturated zone	1.00	Flooding	1.00
		Flooding	1.00	Cutbanks cave	1.00	Depth to saturated zone	0.78
		Low strength	0.78	Flooding	0.80		
13A:							
Comus	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
		Frost action	0.50	Flooding	0.80		

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
14C:							
Cowee	90	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.37
		Slope	0.37	Slope	0.37	Depth to bedrock	0.01
				Depth to soft bedrock	0.01		
14D:							
Cowee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.01
				Depth to soft bedrock	0.01		
14E:							
Cowee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.01
				Depth to soft bedrock	0.01		
15D:							
Cowee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	0.61
				Depth to soft bedrock	0.01	Droughty	0.16
15E:							
Cowee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.61
				Depth to soft bedrock	0.01	Droughty	0.16
16D:							
Cowee	60	Very limited		Very limited		Very limited	
		Slope	1.00	Cutbanks cave	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Depth to bedrock	0.01
				Depth to soft bedrock	0.01		
Rock outcrop	35	Not rated		Not rated		Not rated	
16E:							
Cowee	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.01
				Depth to soft bedrock	0.01		
Rock outcrop	35	Not rated		Not rated		Not rated	
17A:							
Craigsville	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Cutbanks cave	1.00	Flooding	1.00
		Frost action	0.50	Flooding	0.80	Large stones content	0.84
		Large stones content	0.41	Large stones content	0.41	Droughty	0.44

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
18C:							
Cullasaja-----------	85	Somewhat limited		Somewhat limited		Very limited	
		Large stones content	0.88	Large stones content	0.88	Large stones content	0.99
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Cutbanks cave	0.10		
18D:							
Cullasaja-----------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.88	Large stones content	0.88	Large stones content	0.99
		Frost action	0.50	Cutbanks cave	0.10		
19A:							
Delanco-------------	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.48
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Depth to saturated zone	0.48				
19B:							
Delanco-------------	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.48
		Shrink-swell	0.50	Cutbanks cave	0.10		
		Depth to saturated zone	0.48				
20C:							
Delanco-------------	90	Very limited		Very limited		Somewhat limited	
		Frost action	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.48
		Shrink-swell	0.50	Slope	0.37	Slope	0.37
		Depth to saturated zone	0.48	Cutbanks cave	0.10		
21B:							
Edneytown-----------	90	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
21C:							
Edneytown-----------	90	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.37
		Slope	0.37	Slope	0.37		
21D:							
Edneytown-----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00		
21E:							
Edneytown-----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00		
21F:							
Edneytown-----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00		

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
22C:							
Edneytown-----------	60	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.01
		Slope	0.01	Slope	0.01		
Urban land----------	35	Not rated		Not rated		Not rated	
23C:							
Edneyville----------	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Cutbanks cave	0.10		
23D:							
Edneyville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
23E:							
Edneyville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
24D:							
Edneyville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
24E:							
Edneyville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
24F:							
Edneyville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
25B:							
Elsinboro-----------	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
		Flooding	0.40				
26B:							
Elsinboro-----------	60	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
		Flooding	0.40				
Urban land----------	35	Not rated		Not rated		Not rated	
27D:							
Evard---------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.05
Cowee---------------	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.61
				Depth to soft bedrock	0.01	Droughty	0.16

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
28B:							
Glenelg	90	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Cutbanks cave	0.10		
28C:							
Glenelg	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Cutbanks cave	0.10		
28D:							
Glenelg	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
28E:							
Glenelg	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
28F:							
Glenelg	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10		
29C:							
Glenelg	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Gravel content	0.79
		Slope	0.37	Cutbanks cave	0.10	Slope	0.37
29D:							
Glenelg	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.79
29E:							
Glenelg	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.79
30C:							
Glenelg	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	0.10	Slope	0.01
		Slope	0.01	Slope	0.01		
Urban land	35	Not rated		Not rated		Not rated	
31D:							
Greenlee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.99	Large stones content	0.99	Large stones content	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.02
31E:							
Greenlee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones content	0.99	Large stones content	0.99	Large stones content	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.02

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
32A:							
Hatboro	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Flooding	1.00
						Depth to saturated zone	1.00
		Frost action	1.00	Flooding	0.80		
33B:							
Hayesville	90	Somewhat limited		Somewhat limited		Not limited	
		Frost action	0.50	Too clayey	0.12		
		Low strength	0.10	Cutbanks cave	0.10		
33C:							
Hayesville	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Too clayey	0.12		
		Low strength	0.10	Cutbanks cave	0.10		
33D:							
Hayesville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Too clayey	0.12		
		Low strength	0.10	Cutbanks cave	0.10		
34B:							
Keener	90	Somewhat limited		Very limited		Not limited	
		Frost action	0.50	Cutbanks cave	1.00		
34C:							
Keener	90	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.37
		Slope	0.37	Slope	0.37		
34D:							
Keener	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00		
35C:							
Keener	90	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Cutbanks cave	1.00	Slope	0.37
		Slope	0.37	Slope	0.37		
35D:							
Keener	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00		
36A:							
Kinkora	90	Very limited		Very limited		Very limited	
		Ponding	1.00	Ponding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Frost action	1.00	Cutbanks cave	1.00		
37C:							
Konnarock	90	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.95	Depth to hard bedrock	1.00	Depth to bedrock	0.95
						Droughty	0.79
		Frost action	0.50	Slope	0.37	Slope	0.37
		Slope	0.37	Cutbanks cave	0.10		

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
37D:							
Konnarock-----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.95	Slope	1.00	Depth to bedrock	0.95
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.79
37E:							
Konnarock-----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.95	Slope	1.00	Depth to bedrock	0.95
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.79
38C:							
McCamy--------------	85	Somewhat limited		Very limited		Somewhat limited	
		Frost action	0.50	Depth to hard bedrock	1.00	Depth to bedrock	0.80
		Slope	0.37	Cutbanks cave	1.00	Droughty	0.54
		Depth to hard bedrock	0.35	Depth to soft bedrock	0.79	Slope	0.37
38D:							
McCamy--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Depth to bedrock	0.80
		Depth to hard bedrock	0.35	Cutbanks cave	1.00	Droughty	0.54
39D:							
McCamy--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Depth to bedrock	0.80
		Depth to hard bedrock	0.35	Slope	1.00	Droughty	0.54
39E:							
McCamy--------------	85	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Depth to bedrock	0.80
		Depth to hard bedrock	0.35	Cutbanks cave	1.00	Droughty	0.54
40D:							
Mt Rogers-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.89
		Large stones content	0.01	Large stones content	0.01	Large stones content	0.08
Bloodyhorse---------	25	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	1.00	Gravel content	0.97
		Depth to hard bedrock	0.03	Slope	1.00	Droughty	0.24
Rock outcrop--------	15	Not rated		Not rated		Not rated	

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
40F:							
Mt Rogers	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.89
		Large stones content	0.01	Large stones content	0.01	Large stones content	0.08
Bloodyhorse	25	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	0.97
		Depth to hard bedrock	0.03	Cutbanks cave	1.00	Droughty	0.24
Rock outcrop	15	Not rated		Not rated		Not rated	
41C:							
Mt Rogers	45	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Slope	0.37	Gravel content	0.89
		Slope	0.37	Cutbanks cave	0.10	Slope	0.37
		Large stones content	0.01	Large stones content	0.01	Large stones content	0.08
Buzzrock	40	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Depth to hard bedrock	0.96	Droughty	0.66
		Slope	0.37	Slope	0.37	Slope	0.37
		Large stones content	0.09	Large stones content	0.09	Gravel content	0.03
41D:							
Mt Rogers	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Cutbanks cave	0.10	Gravel content	0.89
		Large stones content	0.01	Large stones content	0.01	Large stones content	0.08
Buzzrock	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Depth to hard bedrock	0.96	Droughty	0.66
		Large stones content	0.09	Large stones content	0.09	Gravel content	0.03
42C:							
Peaks	90	Somewhat limited		Very limited		Very limited	
		Frost action	0.50	Depth to hard bedrock	1.00	Gravel content	1.00
		Slope	0.37	Cutbanks cave	1.00	Droughty	1.00
		Depth to hard bedrock	0.29	Slope	0.37	Slope	0.37
42D:							
Peaks	90	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	1.00
		Depth to hard bedrock	0.29	Cutbanks cave	1.00	Droughty	1.00

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
42E:							
Peaks	90	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	1.00
		Depth to hard bedrock	0.29	Cutbanks cave	1.00	Droughty	1.00
43C:							
Peaks	90	Somewhat limited		Very limited		Very limited	
		Frost action	0.50	Depth to hard bedrock	1.00	Gravel content	1.00
		Slope	0.37	Cutbanks cave	1.00	Droughty	1.00
		Depth to hard bedrock	0.29	Slope	0.37	Slope	0.37
43D:							
Peaks	90	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard berdock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	1.00
		Depth to hard bedrock	0.29	Cutbanks cave	1.00	Droughty	1.00
43E:							
Peaks	90	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	1.00
		Depth to hard bedrock	0.29	Cutbanks cave	1.00	Droughty	1.00
43F:							
Peaks	90	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	1.00
		Depth to hard bedrock	0.29	Cutbanks cave	1.00	Droughty	1.00
44C:							
Pigeonroost	85	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Frost action	0.50	Cutbanks cave	0.10	Depth to bedrock	0.03
		Slope	0.37	Depth to soft bedrock	0.03		
44D:							
Pigeonroost	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10	Depth to bedrock	0.03
		Frost action	0.50	Depth to soft bedrock	0.03		
44E:							
Pigeonroost	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10	Depth to bedrock	0.03
		Frost action	0.50	Depth to soft bedrock	0.03		

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
45D:							
Pigeonroost	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10	Gravel content	0.10
		Frost action	0.50	Depth to soft bedrock	0.03	Depth to bedrock	0.03
45E:							
Pigeonroost	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10	Gravel content	0.10
		Frost action	0.50	Depth to soft bedrock	0.03	Depth to bedrock	0.03
46E:							
Pigeonroost	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10	Depth to bedrock	0.03
		Frost action	0.50	Depth to soft bedrock	0.03		
Rock outcrop	30	Not rated		Not rated		Not rated	
47D:							
Pineola	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	0.78	Cutbanks cave	1.00	Depth to bedrock	0.54
		Frost action	0.50	Depth to soft bedrock	0.54	Droughty	0.01
48E:							
Pineola	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	0.78	Cutbanks cave	1.00	Depth to bedrock	0.54
		Frost action	0.50	Depth to soft bedrock	0.54	Droughty	0.01
49:							
Pits, quarries	100	Not rated		Not rated		Not rated	
50F:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Peaks	40	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Frost action	0.50	Slope	1.00	Gravel content	1.00
		Depth to hard bedrock	0.29	Cutbanks cave	1.00	Droughty	1.00
51B:							
Scales	95	Very limited		Very limited		Not rated	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
		Frost action	1.00	Cutbanks cave	1.00		
		Low strength	1.00	Dense layer	0.50		

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
52C:							
Sylco	50	Somewhat limited		Very limited		Somewhat limited	
		Depth to hard bedrock	0.71	Depth to hard bedrock	1.00	Depth to bedrock	0.71
		Frost action	0.50	Slope	0.37	Droughty	0.58
		Slope	0.37	Cutbanks cave	0.10	Slope	0.37
Sylvatus	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Depth to bedrock	1.00
		Frost action	0.50	Slope	0.37	Droughty	1.00
		Slope	0.37	Cutbanks cave	0.10	Slope	0.37
52D:							
Sylco	50	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.71	Slope	1.00	Depth to bedrock	0.71
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.58
Sylvatus	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
52E:							
Sylco	50	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Depth to hard bedrock	0.71	Slope	1.00	Depth to bedrock	0.71
		Frost action	0.50	Cutbanks cave	0.10	Droughty	0.58
Sylvatus	35	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Frost action	0.50	Cutbanks cave	0.10	Droughty	1.00
53B:							
Tate	90	Very limited		Somewhat limited		Not limited	
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
53C:							
Tate	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Frost action	0.50	Cutbanks cave	0.10		
		Slope	0.37				
53D:							
Tate	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets: Rating class and limiting features	Value	Shallow excavations: Rating class and limiting features	Value	Lawns and landscaping: Rating class and limiting features	Value
53E:							
Tate	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
54C:							
Tate	90	Very limited		Somewhat limited		Somewhat limited	
		Low strength	1.00	Slope	0.37	Slope	0.37
		Frost action	0.50	Cutbanks cave	0.10		
		Slope	0.37				
54D:							
Tate	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
54E:							
Tate	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
55D:							
Tate	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Low strength	1.00	Cutbanks cave	0.10		
		Frost action	0.50				
56C:							
Thunder	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Large stones content	0.42	Large stones content	0.68
		Large stones content	0.42	Slope	0.37	Slope	0.37
		Slope	0.37	Cutbanks cave	0.10		
56D:							
Thunder	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Large stones content	0.42	Large stones content	0.68
		Large stones content	0.42	Cutbanks cave	0.10		
56E:							
Thunder	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Large stones content	0.42	Large stones content	0.68
		Large stones content	0.42	Cutbanks cave	0.10		
57C:							
Thunder	80	Somewhat limited		Somewhat limited		Somewhat limited	
		Frost action	0.50	Large stones content	0.42	Large stones content	0.68
		Large stones content	0.42	Slope	0.37	Slope	0.37
		Slope	0.37	Cutbanks cave	0.10		

Table 11.—Building Site Development, Part II—Continued

Map symbol and soil name	Pct. of map unit	Local roads and streets		Shallow excavations		Lawns and landscaping	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
57D:							
Thunder	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Large stones content	0.42	Large stones content	0.68
		Large stones content	0.42	Cutbanks cave	0.10		
57E:							
Thunder	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Frost action	0.50	Large stones content	0.42	Large stones content	0.68
		Large stones content	0.42	Cutbanks cave	0.10		
58D:							
Udorthents	50	Not rated		Not rated		Not rated	
Urban land	35	Not rated		Not rated		Not rated	
59D:							
Unicoi	85	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Droughty	1.00
						Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Frost action	0.50	Cutbanks cave	0.10		
59E:							
Unicoi	85	Very limited		Very limited		Very limited	
		Depth to hard bedrock	1.00	Depth to hard bedrock	1.00	Slope	1.00
						Droughty	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Frost action	0.50	Cutbanks cave	0.10		
W:							
Water	100	Not rated		Not rated		Not rated	

Table 12.—Sanitary Facilities, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
1C:					
Balsam	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones content	0.84	Large stones content	1.00
		Slope	0.04	Slope	1.00
1D:					
Balsam	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones content	0.84	Large stones content	1.00
1E:					
Balsam	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones content	0.84	Large stones content	1.00
2D:					
Balsam	70	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones content	0.84	Large stones content	1.00
Nopan	20	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Organic matter content	1.00
2E:					
Balsam	70	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones content	0.84	Large stones content	1.00
Nopan	20	Very limited		Very limited	
		Slow water movement	1.00	Slope	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slope	1.00	Organic matter content	1.00

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
3D:					
Bloodyhorse---------	80	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
4F:					
Bloodyhorse---------	80	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
5B:					
Braddock------------	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.68	Slope	0.68
				Seepage	0.68
5C:					
Braddock------------	90	Somewhat limited		Very limited	
		Slow water movement	0.68	Slope	1.00
				Seepage	0.68
		Slope	0.37		
5D:					
Braddock------------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.68	Seepage	0.68
6E:					
Braddock------------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.68	Seepage	0.68
				Large stones content	0.01
7D:					
Brevard-------------	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
Greenlee------------	35	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Large stones content	1.00
		Large stones content	0.99	Seepage	1.00
8C:					
Burton--------------	90	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Depth to soft bedrock	1.00
		Slope	0.63	Slope	1.00

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
9D:					
Burton--------------	90	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
9E:					
Burton--------------	90	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
10D:					
Peaks---------------	20	Very limited		Very limited	
		Seepage, bottom layer	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
Chestnut------------	65	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
10E:					
Chestnut------------	65	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Peaks---------------	20	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00
11F:					
Chestnut------------	40	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Peaks---------------	25	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00
Tuckasegee----------	20	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
12A:					
Codorus	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
13A:					
Comus	90	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
14C:					
Cowee	90	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slow water movement	0.50	Slope	1.00
		Slope	0.37	Seepage	0.50
14D:					
Cowee	90	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
14E:					
Cowee	90	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
15D:					
Cowee	90	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
15E:					
Cowee	90	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
16D:					
Cowee	60	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
Rock outcrop	35	Not rated		Not rated	

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
16E:					
Cowee	60	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
Rock outcrop	35	Not rated		Not rated	
17A:					
Craigsville	85	Very limited		Very limited	
		Flooding	1.00	Flooding	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones content	0.41	Large stones content	0.98
18C:					
Cullasaja	85	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Large stones content	0.88	Seepage	1.00
		Slope	0.37	Large stones content	1.00
18D:					
Cullasaja	85	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones content	0.88	Large stones content	1.00
19A:					
Delanco	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Seepage	0.50
		Flooding	0.40	Flooding	0.40
19B:					
Delanco	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Slow water movement	1.00	Slope	0.68
		Flooding	0.40	Seepage	0.50
20C:					
Delanco	90	Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00
		Slow water movement	1.00	Depth to saturated zone	1.00
		Slope	0.37	Seepage	0.50

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
21B:					
Edneytown-----------	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.68
		Slow water movement	0.50		
21C:					
Edneytown-----------	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
				Seepage	1.00
		Slow water movement	0.50		
		Slope	0.37		
21D:					
Edneytown-----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
21E:					
Edneytown-----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
21F:					
Edneytown-----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
22C:					
Edneytown-----------	60	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	1.00
		Slow water movement	0.50		
		Slope	0.01		
Urban land----------	35	Not rated		Not rated	
23C:					
Edneyville----------	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
				Seepage	1.00
		Slope	0.37		
23D:					
Edneyville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
23E:					
Edneyville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
24D:					
Edneyville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
24E:					
Edneyville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
24F:					
Edneyville----------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
25B:					
Elsinboro-----------	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.68
		Slow water movement	0.50	Flooding	0.40
		Flooding	0.40		
26B:					
Elsinboro-----------	60	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Flooding	0.40
		Slow water movement	0.50	Slope	0.32
		Flooding	0.40		
Urban land----------	35	Not rated		Not rated	
27D:					
Evard---------------	50	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
Cowee---------------	35	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00		
		Slow water movement	0.50	Slope	1.00
				Seepage	0.50
28B:					
Glenelg-------------	90	Somewhat limited		Somewhat limited	
		Slow water movement	0.50	Slope	0.68
				Seepage	0.50

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
28C:					
Glenelg	90	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
		Slope	0.37	Seepage	0.50
28D:					
Glenelg	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
28E:					
Glenelg	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
28F:					
Glenelg	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
29C:					
Glenelg	90	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
		Slope	0.37	Seepage	0.50
29D:					
Glenelg	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
29E:					
Glenelg	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
30C:					
Glenelg	60	Somewhat limited		Very limited	
		Slow water movement	0.50	Slope	1.00
		Slope	0.01	Seepage	0.50
Urban land	35	Not rated		Not rated	
31D:					
Greenlee	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Large stones content	1.00
		Large stones content	0.99	Seepage	1.00

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
31E:					
Greenlee	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Large stones content	1.00
		Large stones content	0.99	Seepage	1.00
32A:					
Hatboro	90	Very limited		Very limited	
		Flooding	1.00	Ponding	1.00
		Ponding	1.00	Flooding	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00
33B:					
Hayesville	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.68
		Slow water movement	0.50		
33C:					
Hayesville	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
				Seepage	1.00
		Slow water movement	0.50		
		Slope	0.37		
33D:					
Hayesville	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
34B:					
Keener	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	0.68
		Slow water movement	0.50		
34C:					
Keener	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
				Seepage	1.00
		Slow water movement	0.50		
		Slope	0.37		
34D:					
Keener	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
35C:					
Keener	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	1.00
		Slope	0.37		
35D:					
Keener	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
36A:					
Kinkora	90	Very limited		Very limited	
		Slow water movement	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Seepage	1.00
37C:					
Konnarock	90	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.37	Seepage	1.00
37D:					
Konnarock	90	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
37E:					
Konnarock	90	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
38C:					
McCamy	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Depth to soft bedrock	1.00
		Slope	0.37	Slope	1.00
38D:					
McCamy	85	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
39D:					
McCamy	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Depth to soft bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
39E:					
McCamy	85	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
40D:					
Mt Rogers	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones content	0.01		
Bloodyhorse	25	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Rock outcrop	15	Not rated		Not rated	
40F:					
Mt Rogers	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones content	0.01		
Bloodyhorse	25	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Rock outcrop	15	Not rated		Not rated	
41C:					
Mt Rogers	45	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.37	Seepage	1.00
		Large stones content	0.01		

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
41C:					
Buzzrock------------	40	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Depth to bedrock	0.99	Depth to hard bedrock	0.96
41D:					
Mt Rogers-----------	45	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Large stones content	0.01		
Buzzrock------------	40	Very limited		Very limited	
		Filtering capacity	1.00	Slope	1.00
		Slope	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to hard bedrock	0.96
42C:					
Peaks---------------	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
42D:					
Peaks---------------	90	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00
42E:					
Peaks---------------	90	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00
43C:					
Peaks---------------	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Filtering capacity	1.00	Seepage	1.00
43D:					
Peaks---------------	90	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
43E:					
Peaks	90	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00
43F:					
Peaks	90	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00
44C:					
Pigeonroost	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slow water movement	0.50	Slope	1.00
		Slope	0.37	Seepage	0.50
44D:					
Pigeonroost	85	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
44E:					
Pigeonroost	85	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
45D:					
Pigeonroost	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to soft bedrock	1.00
		Slope	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
45E:					
Pigeonroost	85	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
46E:					
Pigeonroost	60	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
Rock outcrop	30	Not rated		Not rated	

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
47D:					
Pineola	90	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
48E:					
Pineola	90	Very limited		Very limited	
		Slope	1.00	Depth to soft bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	0.50
49:					
Pits, quarries	100	Not rated		Not rated	
50F:					
Rock outcrop	50	Not rated		Not rated	
Peaks	40	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00
51B:					
Scales	95	Very limited		Very limited	
		Slow water movement	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Organic matter content	1.00
				Slope	0.32
52C:					
Sylco	50	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Seepage, bottom layer	1.00	Slope	1.00
		Slope	0.37	Seepage	1.00
Sylvatus	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	0.37	Slope	1.00
				Seepage	0.50
52D:					
Sylco	50	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Sylvatus	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.50

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
52E:					
Sylco	50	Very limited		Very limited	
		Slope	1.00	Depth to hard bedrock	1.00
		Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
Sylvatus	35	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
				Seepage	0.50
53B:					
Tate	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Slope	0.68
53C:					
Tate	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	1.00
		Slope	0.37		
53D:					
Tate	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
53E:					
Tate	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
54C:					
Tate	90	Very limited		Very limited	
		Seepage, bottom layer	1.00	Slope	1.00
		Slow water movement	0.50	Seepage	1.00
		Slope	0.37		
54D:					
Tate	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields: Rating class and limiting features	Value	Sewage lagoons: Rating class and limiting features	Value
54E:					
Tate----------------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
55D:					
Tate----------------	90	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50		
56C:					
Thunder-------------	80	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	1.00
		Slow water movement	0.50	Large stones content	0.88
		Large stones content	0.42		
56D:					
Thunder-------------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Large stones content	0.88
		Slow water movement	0.50		
56E:					
Thunder-------------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Large stones content	0.88
		Slow water movement	0.50		
57C:					
Thunder-------------	80	Very limited		Very limited	
		Seepage, bottom layer	1.00	Seepage	1.00
				Slope	1.00
		Slow water movement	0.50	Large stones content	0.88
		Large stones content	0.42		
57D:					
Thunder-------------	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
				Large stones content	0.88
		Slow water movement	0.50		

Table 12.—Sanitary Facilities, Part I—Continued

Map symbol and soil name	Pct. of map unit	Septic tank absorption fields		Sewage lagoons	
		Rating class and limiting features	Value	Rating class and limiting features	Value
57E:					
Thunder	80	Very limited		Very limited	
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
		Slow water movement	0.50	Large stones content	0.88
58D:					
Udorthents	50	Not rated		Not rated	
Urban land	35	Not rated		Not rated	
59D:					
Unicoi	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
59E:					
Unicoi	85	Very limited		Very limited	
		Depth to bedrock	1.00	Depth to hard bedrock	1.00
		Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00
W:					
Water	100	Not rated		Not rated	

Table 12.—Sanitary Facilities, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1C:							
Balsam	85	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones content	0.96
		Large stones content	0.96	Slope	0.04	Seepage	0.50
		Slope	0.04			Slope	0.04
1D:							
Balsam	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones content	0.96
		Large stones content	0.96			Seepage	0.50
1E:							
Balsam	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones content	0.96
		Large stones content	0.96			Seepage	0.50
2D:							
Balsam	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones content	0.96
		Large stones content	0.96			Seepage	0.50
Nopan	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
2E:							
Balsam	70	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones content	0.96
		Large stones content	0.96			Seepage	0.50
Nopan	20	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Slope	1.00	Slope	1.00
		Slope	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
3D:							
Bloodyhorse----------	80	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Gravel content	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Slope	1.00
4F:							
Bloodyhorse----------	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Gravel content	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Depth to bedrock	1.00
5B:							
Braddock-------------	90	Very limited		Not limited		Very limited	
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
5C:							
Braddock-------------	90	Very limited		Somewhat limited		Very limited	
		Too clayey	1.00	Slope	0.37	Too clayey	1.00
		Slope	0.37			Hard to compact	1.00
						Slope	0.37
5D:							
Braddock-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
6E:							
Braddock-------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	1.00			Too clayey	1.00
						Hard to compact	1.00
7D:							
Brevard--------------	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Gravel content	0.03
Greenlee-------------	35	Very limited		Very limited		Very limited	
		Large stones	1.00	Slope	1.00	Large stones	1.00
		Slope	1.00	Seepage	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Seepage	0.50
8C:							
Burton---------------	90	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Slope	0.63
		Slope	0.63	Slope	0.63	Seepage	0.09

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
9D:							
Burton	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.09
9E:							
Burton	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.09
10D:							
Peaks	20	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
Chestnut	65	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
10E:							
Chestnut	65	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Peaks	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
11F:							
Chestnut	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
Peaks	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
Tuckasegee	20	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.23

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
12A:							
Codorus	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Depth to saturated zone	1.00
		Depth to saturated zone	1.00	Depth to saturated zone	1.00		
		Seepage, bottom layer	1.00	Seepage	1.00		
13A:							
Comus	90	Very limited		Very limited		Not limited	
		Flooding	1.00	Flooding	1.00		
		Seepage, bottom layer	1.00				
14C:							
Cowee	90	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50	Slope	0.37	Too clayey	0.50
		Slope	0.37			Slope	0.37
14D:							
Cowee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
14E:							
Cowee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
15D:							
Cowee	90	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Gravel content	0.61
15E:							
Cowee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Gravel content	0.61
16D:							
Cowee	60	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
Rock outcrop	35	Not rated		Not rated		Not rated	
16E:							
Cowee	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
Rock outcrop	35	Not rated		Not rated		Not rated	

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
17A:							
Craigsville	85	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones content	0.54
		Large stones content	0.54			Too sandy	0.50
18C:							
Cullasaja	85	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones content	0.93
		Large stones content	0.93	Slope	0.37	Seepage	0.50
		Slope	0.37			Slope	0.37
18D:							
Cullasaja	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones content	0.93
		Large stones content	0.93			Seepage	0.50
19A:							
Delanco	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.96
		Flooding	0.40	Flooding	0.40		
19B:							
Delanco	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.96
		Flooding	0.40	Flooding	0.40		
20C:							
Delanco	90	Very limited		Very limited		Somewhat limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	0.96
		Slope	0.37	Slope	0.37	Slope	0.37
21B:							
Edneytown	90	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Too sandy	0.50			Too sandy	0.50
21C:							
Edneytown	90	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Too sandy	0.50	Slope	0.37	Too sandy	0.50
		Slope	0.37			Slope	0.37
21D:							
Edneytown	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
		Too sandy	0.50			Too sandy	0.50

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
21E:							
Edneytown-----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
						Too sandy	0.50
		Too sandy	0.50				
21F:							
Edneytown-----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
						Too sandy	0.50
		Too sandy	0.50				
22C:							
Edneytown-----------	60	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
				Slope	0.01	Too sandy	0.50
		Too sandy	0.50			Slope	0.01
		Slope	0.01				
Urban land----------	35	Not rated		Not rated		Not rated	
23C:							
Edneyville----------	90	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
				Slope	0.37	Slope	0.37
		Slope	0.37				
23D:							
Edneyville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
23E:							
Edneyville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
24D:							
Edneyville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
24E:							
Edneyville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
24F:							
Edneyville----------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
25B:							
Elsinboro	90	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Flooding	0.40	Too clayey	0.50
		Too clayey	0.50				
		Flooding	0.40				
26B:							
Elsinboro	60	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Flooding	0.40	Too clayey	0.50
		Too clayey	0.50				
		Flooding	0.40				
Urban land	35	Not rated		Not rated		Not rated	
27D:							
Evard	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Too clayey	0.50
						Seepage	0.31
Cowee	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Gravel content	0.61
28B:							
Glenelg	90	Not limited		Not limited		Not limited	
28C:							
Glenelg	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Slope	0.37
28D:							
Glenelg	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
28E:							
Glenelg	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
28F:							
Glenelg	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
29C:							
Glenelg	90	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.37	Slope	0.37	Slope	0.37
29D:							
Glenelg	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
29E:							
Glenelg	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
30C:							
Glenelg	60	Somewhat limited		Somewhat limited		Somewhat limited	
		Slope	0.01	Slope	0.01	Slope	0.01
Urban land	35	Not rated		Not rated		Not rated	
31D:							
Greenlee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	1.00	Seepage	1.00	Large stones	1.00
		Seepage, bottom layer	1.00			Seepage	0.50
31E:							
Greenlee	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Large stones	1.00	Seepage	1.00	Large stones	1.00
		Seepage, bottom layer	1.00			Seepage	0.50
32A:							
Hatboro	90	Very limited		Very limited		Very limited	
		Flooding	1.00	Flooding	1.00	Ponding	1.00
		Depth to saturated zone	1.00	Ponding	1.00	Depth to saturated zone	1.00
		Ponding	1.00	Depth to saturated zone	1.00		
33B:							
Hayesville	90	Very limited		Not limited		Somewhat limited	
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
33C:							
Hayesville	90	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.37	Too clayey	0.50
		Too clayey	0.50			Slope	0.37
		Slope	0.37				
33D:							
Hayesville	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
34B:							
Keener	90	Very limited		Not limited		Somewhat limited	
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
34C:							
Keener	90	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.37	Too clayey	0.50
		Too clayey	0.50			Slope	0.37
		Slope	0.37				

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
34D:							
Keener	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
35C:							
Keener	90	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.37	Too clayey	0.50
		Too clayey	0.50			Slope	0.37
		Slope	0.37				
35D:							
Keener	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Too clayey	0.50
		Too clayey	0.50				
36A:							
Kinkora	90	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Ponding	1.00	Ponding	1.00
		Ponding	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Seepage, bottom layer	1.00	Flooding	0.40	Too clayey	0.50
37C:							
Konnarock	90	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.53
		Slope	0.37	Slope	0.37	Seepage	0.50
37D:							
Konnarock	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.53
37E:							
Konnarock	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.53
38C:							
McCamy	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.52
		Slope	0.37	Slope	0.37	Slope	0.37

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
38D:							
McCamy	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.52
39D:							
McCamy	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.52
39E:							
McCamy	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.52
40D:							
Mt Rogers	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.32
		Large stones content	0.23				
Bloodyhorse	25	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Gravel content	1.00
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Slope	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
40F:							
Mt Rogers	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.32
		Large stones content	0.23				
Bloodyhorse	25	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Gravel content	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Depth to bedrock	1.00
Rock outcrop	15	Not rated		Not rated		Not rated	
41C:							
Mt Rogers	45	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
				Slope	0.37	Slope	0.37
		Slope	0.37			Gravel content	0.32
		Large stones content	0.23				

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
41C:							
Buzzrock------------	40	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	0.96	Depth to bedrock	0.96
				Slope	0.37	Gravel content	0.53
		Slope	0.37				
41D:							
Mt Rogers-----------	45	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Seepage	0.50
						Gravel content	0.32
		Large stones content	0.23				
Buzzrock------------	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	0.96	Depth to bedrock	0.96
42C:							
Peaks---------------	90	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
				Slope	0.37	Depth to bedrock	1.00
		Slope	0.37				
42D:							
Peaks---------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
42E:							
Peaks---------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
43C:							
Peaks---------------	90	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
				Slope	0.37	Depth to bedrock	1.00
		Slope	0.37				
43D:							
Peaks---------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
43E:							
Peaks	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
43F:							
Peaks	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
44C:							
Pigeonroost	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50	Slope	0.37	Too clayey	0.50
		Slope	0.37			Slope	0.37
44D:							
Pigeonroost	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
44E:							
Pigeonroost	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
45D:							
Pigeonroost	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Slope	1.00
		Too clayey	0.50			Too clayey	0.50
45E:							
Pigeonroost	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
46E:							
Pigeonroost	60	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
Rock outcrop	30	Not rated		Not rated		Not rated	
47D:							
Pineola	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
48E:							
Pineola	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Too clayey	0.50			Too clayey	0.50
49:							
Pits, quarries	100	Not rated		Not rated		Not rated	
50F:							
Rock outcrop	50	Not rated		Not rated		Not rated	
Peaks	40	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Seepage	1.00	Seepage	1.00
		Seepage, bottom layer	1.00	Depth to bedrock	1.00	Gravel content	1.00
51B:							
Scales	95	Very limited		Very limited		Very limited	
		Depth to saturated zone	1.00	Depth to saturated zone	1.00	Depth to saturated zone	1.00
		Too clayey	0.50			Too clayey	0.50
52C:							
Sylco	50	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.78
		Slope	0.37	Slope	0.37	Slope	0.37
Sylvatus	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	0.37	Slope	0.37	Gravel content	0.93
						Slope	0.37
52D:							
Sylco	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.78
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.93
52E:							
Sylco	50	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Gravel content	0.78
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
						Gravel content	0.93

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill: Rating class and limiting features	Value	Area sanitary landfill: Rating class and limiting features	Value	Daily cover for landfill: Rating class and limiting features	Value
53B:							
Tate----------------	90	Very limited		Not limited		Not limited	
		Seepage, bottom layer	1.00				
53C:							
Tate----------------	90	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.37	Slope	0.37
		Slope	0.37				
53D:							
Tate----------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00				
53E:							
Tate----------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00				
54C:							
Tate----------------	90	Very limited		Somewhat limited		Somewhat limited	
		Seepage, bottom layer	1.00	Slope	0.37	Slope	0.37
		Slope	0.37				
54D:							
Tate----------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00				
54E:							
Tate----------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00				
55D:							
Tate----------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00				
56C:							
Thunder-------------	80	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones content	0.56
				Slope	0.37		
		Large stones content	0.56			Slope	0.37
		Slope	0.37				

Table 12.—Sanitary Facilities, Part II—Continued

Map symbol and soil name	Pct. of map unit	Trench sanitary landfill		Area sanitary landfill		Daily cover for landfill	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
56D:							
Thunder	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones content	0.56
		Large stones content	0.56				
56E:							
Thunder	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones content	0.56
		Large stones content	0.56				
57C:							
Thunder	80	Very limited		Very limited		Somewhat limited	
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones content	0.56
		Large stones content	0.56	Slope	0.37	Slope	0.37
		Slope	0.37				
57D:							
Thunder	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones content	0.56
		Large stones content	0.56				
57E:							
Thunder	80	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Slope	1.00
		Seepage, bottom layer	1.00	Seepage	1.00	Large stones content	0.56
		Large stones content	0.56				
58D:							
Udorthents	50	Not rated		Not rated		Not rated	
Urban land	35	Not rated		Not rated		Not rated	
59D:							
Unicoi	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Depth to bedrock	1.00	Depth to bedrock	1.00
		Slope	1.00	Slope	1.00	Gravel content	1.00
		Seepage, bottom layer	1.00			Slope	1.00
59E:							
Unicoi	85	Very limited		Very limited		Very limited	
		Slope	1.00	Slope	1.00	Depth to bedrock	1.00
		Depth to bedrock	1.00	Depth to bedrock	1.00	Slope	1.00
		Seepage, bottom layer	1.00			Gravel content	1.00
W:							
Water	100	Not rated		Not rated		Not rated	

Table 13.—Construction Materials, Part I

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The ratings given for the thickest layer are for the thickest layer above and excluding the bottom layer. The numbers in the value columns range from 0.00 to 0.99. The greater the value, the greater the likelihood that the bottom layer or thickest layer of the soil is a source of sand or gravel. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
1C:					
Balsam	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
1D:					
Balsam	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
1E:					
Balsam	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
2D:					
Balsam	70	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
Nopan	20	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.03
2E:					
Balsam	70	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Nopan	20	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.03
3D:					
Bloodyhorse	80	Fair		Poor	
		Thickest layer	0.15	Bottom layer	0.00
		Bottom layer	0.53	Thickest layer	0.00
4F:					
Bloodyhorse	80	Fair		Poor	
		Thickest layer	0.15	Bottom layer	0.00
		Bottom layer	0.53	Thickest layer	0.00
5B:					
Braddock	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
5C:					
Braddock	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
5D:					
Braddock------------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
6E:					
Braddock------------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
7D:					
Brevard-------------	50	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.01
Greenlee------------	35	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
8C:					
Burton--------------	90	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.05	Bottom layer	0.04
9D:					
Burton--------------	90	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.05	Bottom layer	0.04
9E:					
Burton--------------	90	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.05	Bottom layer	0.04
10D:					
Peaks---------------	20	Fair		Fair	
		Thickest layer	0.11	Thickest layer	0.00
		Bottom layer	0.82	Bottom layer	0.04
Chestnut------------	65	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.01
10E:					
Chestnut------------	65	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.01
Peaks---------------	20	Fair		Fair	
		Thickest layer	0.11	Thickest layer	0.00
		Bottom layer	0.82	Bottom layer	0.04
11F:					
Chestnut------------	40	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.01
		Thickest layer	0.00	Thickest layer	0.01
Peaks---------------	25	Fair		Fair	
		Thickest layer	0.11	Thickest layer	0.00
		Bottom layer	0.82	Bottom layer	0.04

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
11F:					
Tuckasegee----------	20	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
12A:					
Codorus-------------	90	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.22	Bottom layer	0.04
13A:					
Comus---------------	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.02
		Bottom layer	0.00	Bottom layer	0.07
14C:					
Cowee---------------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
14D:					
Cowee---------------	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
14E:					
Cowee---------------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
15D:					
Cowee---------------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
15E:					
Cowee---------------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
16D:					
Cowee---------------	60	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
Rock outcrop--------	35	Not rated		Not rated	
16E:					
Cowee---------------	60	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
Rock outcrop--------	35	Not rated		Not rated	
17A:					
Craigsville---------	85	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
18C:					
Cullasaja-----------	85	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
18D:					
Cullasaja-----------	85	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
19A:					
Delanco-------------	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
19B:					
Delanco-------------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
20C:					
Delanco-------------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
21B:					
Edneytown-----------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.11
21C:					
Edneytown-----------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.11
21D:					
Edneytown-----------	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.11
21E:					
Edneytown-----------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.11
21F:					
Edneytown-----------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.11
22C:					
Edneytown-----------	60	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.11
Urban land----------	35	Not rated		Not rated	
23C:					
Edneyville----------	90	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.03

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
23D:					
Edneyville----------	90	Poor		Fair	
		Thickest layer	0.00	Bottom layer	0.03
		Bottom layer	0.00	Thickest layer	0.03
23E:					
Edneyville----------	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03
24D:					
Edneyville----------	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03
24E:					
Edneyville----------	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03
24F:					
Edneyville----------	90	Poor		Fair	
		Bottom layer	0.00	Bottom layer	0.03
		Thickest layer	0.00	Thickest layer	0.03
25B:					
Elsinboro-----------	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
26B:					
Elsinboro-----------	60	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.04
Urban land----------	35	Not rated		Not rated	
27D:					
Evard---------------	50	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.01
Cowee---------------	35	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
28B:					
Glenelg-------------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.02
28C:					
Glenelg-------------	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.02
28D:					
Glenelg-------------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.02

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
28E:					
Glenelg	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.02
28F:					
Glenelg	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.02
29C:					
Glenelg	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.02
29D:					
Glenelg	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.02
29E:					
Glenelg	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.02
30C:					
Glenelg	60	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.02
Urban land	35	Not rated		Not rated	
31D:					
Greenlee	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
31E:					
Greenlee	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
32A:					
Hatboro	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
33B:					
Hayesville	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
33C:					
Hayesville	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
33D:					
Hayesville	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
34B:					
Keener--------------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
34C:					
Keener--------------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
34D:					
Keener--------------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
35C:					
Keener--------------	90	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
35D:					
Keener--------------	90	Poor		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.00	Thickest layer	0.00
36A:					
Kinkora-------------	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.11
37C:					
Konnarock-----------	90	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.23	Thickest layer	0.00
37D:					
Konnarock-----------	90	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.23	Thickest layer	0.00
37E:					
Konnarock-----------	90	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.23	Thickest layer	0.00
38C:					
McCamy--------------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
38D:					
McCamy--------------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
39D:					
McCamy--------------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel: Rating class	Value	Potential source of sand: Rating class	Value
39E:					
McCamy	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
40D:					
Mt Rogers	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Bloodyhorse	25	Fair		Poor	
		Thickest layer	0.15	Bottom layer	0.00
		Bottom layer	0.53	Thickest layer	0.00
Rock outcrop	15	Not rated		Not rated	
40F:					
Mt Rogers	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Bloodyhorse	25	Fair		Poor	
		Thickest layer	0.15	Bottom layer	0.00
		Bottom layer	0.53	Thickest layer	0.00
Rock outcrop	15	Not rated		Not rated	
41C:					
Mt Rogers	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Buzzrock	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
41D:					
Mt Rogers	45	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
Buzzrock	40	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
42C:					
Peaks	90	Fair		Fair	
		Thickest layer	0.11	Thickest layer	0.00
		Bottom layer	0.82	Bottom layer	0.04
42D:					
Peaks	90	Fair		Fair	
		Thickest layer	0.11	Thickest layer	0.00
		Bottom layer	0.82	Bottom layer	0.04
42E:					
Peaks	90	Fair		Fair	
		Thickest layer	0.11	Thickest layer	0.00
		Bottom layer	0.82	Bottom layer	0.04

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
43C:					
Peaks---------------	90	Fair		Fair	
		Thickest layer	0.11	Thickest layer	0.00
		Bottom layer	0.82	Bottom layer	0.04
43D:					
Peaks---------------	90	Fair		Fair	
		Thickest layer	0.11	Thickest layer	0.00
		Bottom layer	0.82	Bottom layer	0.04
43E:					
Peaks---------------	90	Fair		Fair	
		Thickest layer	0.11	Thickest layer	0.00
		Bottom layer	0.82	Bottom layer	0.04
43F:					
Peaks---------------	90	Fair		Fair	
		Thickest layer	0.11	Thickest layer	0.00
		Bottom layer	0.82	Bottom layer	0.04
44C:					
Pigeonroost---------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
44D:					
Pigeonroost---------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
44E:					
Pigeonroost---------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
45D:					
Pigeonroost---------	85	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
45E:					
Pigeonroost---------	85	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
46E:					
Pigeonroost---------	60	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
Rock outcrop--------	30	Not rated		Not rated	
47D:					
Pineola-------------	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
48E:					
Pineola-------------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
49:					
Pits, quarries------	100	Not rated		Not rated	
50F:					
Rock outcrop--------	50	Not rated		Not rated	
Peaks---------------	40	Fair		Fair	
		Thickest layer	0.11	Thickest layer	0.00
		Bottom layer	0.82	Bottom layer	0.04
51B:					
Scales--------------	95	Poor		Poor	
		Bottom layer	0.00	Bottom layer	0.00
		Thickest layer	0.00	Thickest layer	0.00
52C:					
Sylco---------------	50	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.20	Thickest layer	0.00
Sylvatus------------	35	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.20	Thickest layer	0.00
52D:					
Sylco---------------	50	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.20	Thickest layer	0.00
Sylvatus------------	35	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.20	Thickest layer	0.00
52E:					
Sylco---------------	50	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.20	Thickest layer	0.00
Sylvatus------------	35	Fair		Poor	
		Thickest layer	0.00	Bottom layer	0.00
		Bottom layer	0.20	Thickest layer	0.00
53B:					
Tate----------------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
53C:					
Tate----------------	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
53D:					
Tate----------------	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
53E:					
Tate----------------	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
54C:					
Tate	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
54D:					
Tate	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
54E:					
Tate	90	Poor		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.03
55D:					
Tate	90	Poor		Fair	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.03
56C:					
Thunder	80	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
56D:					
Thunder	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
56E:					
Thunder	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
57C:					
Thunder	80	Poor		Poor	
		Bottom layer	0.00	Thickest layer	0.00
		Thickest layer	0.00	Bottom layer	0.00
57D:					
Thunder	80	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
57E:					
Thunder	80	Poor		Poor	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.00	Bottom layer	0.00
58D:					
Udorthents	50	Not rated		Not rated	
Urban land	35	Not rated		Not rated	
59D:					
Unicoi	85	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.38	Bottom layer	0.03

Table 13.—Construction Materials, Part I—Continued

Map symbol and soil name	Pct. of map unit	Potential source of gravel		Potential source of sand	
		Rating class	Value	Rating class	Value
59E:					
Unicoi--------------	85	Fair		Fair	
		Thickest layer	0.00	Thickest layer	0.00
		Bottom layer	0.38	Bottom layer	0.03
W:					
Water---------------	100	Not rated		Not rated	

Table 13.—Construction Materials, Part II

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.00 to 0.99. The smaller the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
1C:							
Balsam	85	Fair		Poor		Poor	
		Cobble content	0.04	Cobble content	0.00	Hard to reclaim (rock fragments)	0.00
		Too acid	0.20			Rock fragments	0.00
						Too acid	0.76
1D:							
Balsam	85	Fair		Poor		Poor	
		Cobble content	0.04	Cobble content	0.00	Slope	0.00
		Too acid	0.20	Slope	0.00	Hard to reclaim (rock fragments)	0.00
						Rock fragments	0.00
1E:							
Balsam	85	Fair		Poor		Poor	
		Cobble content	0.04	Slope	0.00	Slope	0.00
		Too acid	0.20	Cobble content	0.00	Hard to reclaim (rock fragments)	0.00
						Rock fragments	0.00
2D:							
Balsam	70	Fair		Poor		Poor	
		Cobble content	0.04	Cobble content	0.00	Slope	0.00
		Too acid	0.20	Slope	0.00	Hard to reclaim (rock fragments)	0.00
						Rock fragments	0.00
Nopan	20	Fair		Poor		Poor	
		Too sandy	0.04	Wetness depth	0.00	Slope	0.00
		Too acid	0.46	Slope	0.00	Wetness depth	0.00
		Water erosion	0.90			Too sandy	0.04
2E:							
Balsam	70	Fair		Poor		Poor	
		Cobble content	0.04	Slope	0.00	Slope	0.00
		Too acid	0.20	Cobble content	0.00	Hard to reclaim (rock fragments)	0.00
						Rock fragments	0.00
Nopan	20	Fair		Poor		Poor	
		Too sandy	0.04	Wetness depth	0.00	Slope	0.00
		Too acid	0.46	Slope	0.00	Wetness depth	0.00
		Water erosion	0.90			Too sandy	0.04
3D:							
Bloodyhorse	80	Fair		Poor		Poor	
		Droughty	0.02	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50	Slope	0.32	Slope	0.00
		Depth to bedrock	0.97			Too acid	0.59

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
4F:							
Bloodyhorse	80	Fair		Poor		Poor	
		Droughty	0.02	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.97			Too acid	0.59
5B:							
Braddock	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.92	Too acid	0.95
		Too acid	0.46				
5C:							
Braddock	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Too clayey	0.00
		Organic matter content low	0.12	Shrink-swell	0.92	Slope	0.63
						Too acid	0.95
		Too acid	0.46				
5D:							
Braddock	90	Poor		Poor		Poor	
		Too clayey	0.00	Low strength	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.50	Too clayey	0.00
				Shrink-swell	0.92	Too acid	0.95
		Too acid	0.46				
6E:							
Braddock	90	Poor		Poor		Poor	
		Too clayey	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Low strength	0.00	Too clayey	0.00
				Shrink-swell	0.92	Rock fragments	0.59
		Too acid	0.46				
7D:							
Brevard	50	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.92	Slope	0.00
						Rock fragments	0.12
		Too acid	0.54			Hard to reclaim (rock fragments)	0.32
Greenlee	35	Poor		Poor		Poor	
		Cobble content	0.00	Cobble content	0.00	Hard to reclaim (rock fragments)	0.00
		Too acid	0.12	Slope	0.92		
		Droughty	0.98			Rock fragments	0.00
						Slope	0.00
8C:							
Burton	90	Fair		Poor		Fair	
		Depth to bedrock	0.21	Depth to bedrock	0.00	Depth to bedrock	0.21
		Droughty	0.27			Slope	0.37
		Too acid	0.50			Too acid	0.76
9D:							
Burton	90	Fair		Poor		Poor	
		Depth to bedrock	0.21	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.27	Slope	0.00	Depth to bedrock	0.21
		Too acid	0.50			Too acid	0.76

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
9E:							
Burton	90	Fair		Poor		Poor	
		Depth to bedrock	0.21	Slope	0.00	Slope	0.00
		Droughty	0.27	Depth to bedrock	0.00	Depth to bedrock	0.21
		Too acid	0.50			Too acid	0.76
10D:							
Peaks	20	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12	Slope	0.92	Slope	0.00
						Depth to bedrock	0.71
		Too acid	0.50				
Chestnut	65	Fair		Poor		Poor	
		Droughty	0.17	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.46	Slope	0.92	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.46
10E:							
Chestnut	65	Fair		Poor		Poor	
		Droughty	0.17	Slope	0.00	Slope	0.00
		Depth to bedrock	0.46	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.46
Peaks	20	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Depth to bedrock	0.00	Rock fragments	0.00
						Depth to bedrock	0.71
		Too acid	0.50				
11F:							
Chestnut	40	Fair		Poor		Poor	
		Droughty	0.17	Slope	0.00	Slope	0.00
		Depth to bedrock	0.46	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.46
Peaks	25	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Depth to bedrock	0.00	Rock fragments	0.00
						Depth to bedrock	0.71
		Too acid	0.50				
Tuckasegee	20	Fair		Poor		Poor	
		Too acid	0.92	Slope	0.00	Slope	0.00
						Rock fragments	0.00
						Hard to reclaim (rock fragments)	0.08
12A:							
Codorus	90	Fair		Fair		Poor	
		Organic matter content low	0.12	Wetness depth	0.12	Hard to reclaim (rock fragments)	0.00
				Low strength	0.22		
		Too acid	0.46			Wetness depth	0.12
		Water erosion	0.99			Too acid	0.95

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
13A:							
Comus	90	Fair		Good		Fair	
		Organic matter content low	0.50			Too acid	0.98
		Too acid	0.54			Too sandy	0.98
		Too sandy	0.98				
14C:							
Cowee	90	Fair		Poor		Fair	
		Droughty	0.45	Depth to bedrock	0.00	Slope	0.63
		Too acid	0.50			Rock fragments	0.76
		Organic matter content low	0.88			Too acid	0.95
14D:							
Cowee	90	Fair		Poor		Poor	
		Droughty	0.45	Depth to bedrock	0.00	Slope	0.00
		Too acid	0.50	Slope	0.00	Rock fragments	0.76
		Organic matter content low	0.88			Too acid	0.95
14E:							
Cowee	90	Fair		Poor		Poor	
		Droughty	0.45	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00	Rock fragments	0.76
		Organic matter content low	0.88			Too acid	0.95
15D:							
Cowee	90	Fair		Poor		Poor	
		Droughty	0.05	Depth to bedrock	0.00	Slope	0.00
		Too acid	0.50	Slope	0.32	Rock fragments	0.00
		Organic matter content low	0.88			Too acid	0.95
15E:							
Cowee	90	Fair		Poor		Poor	
		Droughty	0.05	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.88			Too acid	0.95
16D:							
Cowee	60	Fair		Poor		Poor	
		Droughty	0.45	Depth to bedrock	0.00	Slope	0.00
		Too acid	0.50	Slope	0.32	Rock fragments	0.76
		Organic matter content low	0.88			Too acid	0.95
Rock outcrop	35	Not rated		Not rated		Not rated	
16E:							
Cowee	60	Fair		Poor		Poor	
		Droughty	0.45	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00	Rock fragments	0.76
		Organic matter content low	0.88			Too acid	0.95
Rock outcrop	35	Not rated		Not rated		Not rated	

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
17A:							
Craigsville----------	85	Fair		Poor		Poor	
		Droughty	0.22	Cobble content	0.00	Hard to reclaim (rock fragments)	0.00
		Cobble content	0.46			Rock fragments	0.00
		Too acid	0.50			Too acid	0.76
18C:							
Cullasaja-----------	85	Fair		Poor		Poor	
		Cobble content	0.07	Cobble content	0.00	Hard to reclaim (rock fragments)	0.00
		Too acid	0.20			Rock fragments	0.00
						Slope	0.63
18D:							
Cullasaja-----------	85	Fair		Poor		Poor	
		Cobble content	0.07	Cobble content	0.00	Slope	0.00
		Too acid	0.20	Slope	0.00	Hard to reclaim (rock fragments)	0.00
						Rock fragments	0.00
19A:							
Delanco-------------	90	Fair		Fair		Fair	
		Too acid	0.12	Wetness depth	0.29	Wetness depth	0.29
		Organic matter content low	0.12	Shrink-swell	0.99	Too acid	0.59
						Rock fragments	0.76
19B:							
Delanco-------------	90	Fair		Fair		Fair	
		Too acid	0.12	Wetness depth	0.29	Wetness depth	0.29
		Organic matter content low	0.12	Shrink-swell	0.99	Too acid	0.59
						Rock fragments	0.76
20C:							
Delanco-------------	90	Fair		Fair		Fair	
		Too acid	0.12	Wetness depth	0.29	Wetness depth	0.29
		Organic matter content low	0.12	Shrink-swell	0.99	Too acid	0.59
						Slope	0.63
21B:							
Edneytown-----------	90	Fair		Good		Fair	
		Organic matter content low	0.12			Too acid	0.95
		Too acid	0.50				
		Water erosion	0.68				
21C:							
Edneytown-----------	90	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.63
		Too acid	0.50			Too acid	0.95
		Water erosion	0.68				
21D:							
Edneytown-----------	90	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.50	Slope	0.00
		Too acid	0.50			Too acid	0.95
		Water erosion	0.68				

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
21E:							
Edneytown-----------	90	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
						Too acid	0.95
		Too acid	0.50				
		Water erosion	0.68				
21F:							
Edneytown-----------	90	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
						Too acid	0.95
		Too acid	0.50				
		Water erosion	0.68				
22C:							
Edneytown-----------	60	Fair		Good		Fair	
		Organic matter content low	0.12			Too acid	0.95
		Too acid	0.50				
		Water erosion	0.68				
Urban land----------	35	Not rated		Not rated		Not rated	
23C:							
Edneyville----------	90	Fair		Good		Fair	
		Organic matter content low	0.02			Slope	0.63
						Too acid	0.98
		Too acid	0.50				
		Water erosion	0.99				
23D:							
Edneyville----------	90	Fair		Poor		Poor	
		Organic matter content low	0.02	Slope	0.00	Slope	0.00
						Too acid	0.98
		Too acid	0.50				
		Water erosion	0.99				
23E:							
Edneyville----------	90	Fair		Poor		Poor	
		Organic matter content low	0.02	Slope	0.00	Slope	0.00
						Too acid	0.98
		Too acid	0.50				
		Water erosion	0.99				
24D:							
Edneyville----------	90	Fair		Poor		Poor	
		Organic matter content low	0.02	Slope	0.00	Slope	0.00
						Too acid	0.98
		Too acid	0.50				
		Water erosion	0.99				
24E:							
Edneyville----------	90	Fair		Poor		Poor	
		Organic matter content low	0.02	Slope	0.00	Slope	0.00
						Too acid	0.98
		Too acid	0.50				
		Water erosion	0.99				

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
24F:							
Edneyville----------	90	Fair		Poor		Poor	
		Organic matter content low	0.02	Slope	0.00	Slope	0.00
		Too acid	0.50			Too acid	0.98
		Water erosion	0.99				
25B:							
Elsinboro-----------	90	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Hard to reclaim (rock fragments)	0.02
		Too acid	0.46			Too acid	0.95
26B:							
Elsinboro-----------	60	Fair		Poor		Fair	
		Organic matter content low	0.12	Low strength	0.00	Hard to reclaim (rock fragments)	0.02
		Too acid	0.46			Too acid	0.95
Urban land----------	35	Not rated		Not rated		Not rated	
27D:							
Evard---------------	50	Fair		Fair		Poor	
		Too acid	0.50	Slope	0.50	Slope	0.00
		Organic matter content low	0.50			Too clayey	0.66
						Too acid	0.88
		Too clayey	0.92				
Cowee---------------	35	Fair		Poor		Poor	
		Droughty	0.05	Depth to bedrock	0.00	Slope	0.00
		Too acid	0.50	Slope	0.50	Rock fragments	0.00
		Organic matter content low	0.88			Too acid	0.95
28B:							
Glenelg-------------	90	Fair		Good		Good	
		Organic matter content low	0.12				
		Too acid	0.50				
28C:							
Glenelg-------------	90	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.63
		Too acid	0.50				
28D:							
Glenelg-------------	90	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.50	Slope	0.00
		Too acid	0.50				
28E:							
Glenelg-------------	90	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Too acid	0.50				

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
28F:							
Glenelg	90	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Too acid	0.50				
29C:							
Glenelg	90	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.63
		Too acid	0.50				
29D:							
Glenelg	90	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Too acid	0.50				
29E:							
Glenelg	90	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Too acid	0.50				
30C:							
Glenelg	60	Fair		Good		Good	
		Organic matter content low	0.12				
		Too acid	0.50				
Urban land	35	Not rated		Not rated		Not rated	
31D:							
Greenlee	90	Poor		Poor		Poor	
		Cobble content	0.00	Cobble content	0.00	Slope	0.00
		Too acid	0.12	Slope	0.00	Hard to reclaim (rock fragments)	0.00
		Droughty	0.98			Rock fragments	0.00
31E:							
Greenlee	90	Poor		Poor		Poor	
		Cobble content	0.00	Slope	0.00	Slope	0.00
		Too acid	0.12	Cobble content	0.00	Hard to reclaim (rock fragments)	0.00
		Droughty	0.98			Rock fragments	0.00
32A:							
Hatboro	90	Fair		Poor		Poor	
		Organic matter content low	0.12	Wetness depth	0.00	Wetness depth	0.00
		Too acid	0.88				
33B:							
Hayesville	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12			Too acid	0.95
		Too acid	0.46				

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
33C:							
Hayesville----------	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Too clayey	0.00
		Organic matter content low	0.12			Slope	0.63
						Too acid	0.95
		Too acid	0.46				
33D:							
Hayesville----------	90	Poor		Fair		Poor	
		Too clayey	0.00	Low strength	0.10	Slope	0.00
		Organic matter content low	0.12	Slope	0.50	Too clayey	0.00
						Too acid	0.95
		Too acid	0.46				
34B:							
Keener--------------	90	Fair		Good		Fair	
		Too acid	0.20			Too acid	0.76
		Organic matter content low	0.50			Rock fragments	0.92
		Water erosion	0.99				
34C:							
Keener--------------	90	Fair		Good		Fair	
		Too acid	0.20			Slope	0.63
		Organic matter content low	0.50			Too acid	0.76
						Rock fragments	0.92
		Water erosion	0.99				
34D:							
Keener--------------	90	Fair		Fair		Poor	
		Too acid	0.20	Slope	0.50	Slope	0.00
		Organic matter content low	0.50			Too acid	0.76
						Rock fragments	0.92
		Water erosion	0.99				
35C:							
Keener--------------	90	Fair		Good		Fair	
		Too acid	0.20			Slope	0.63
		Organic matter content low	0.50			Too acid	0.76
						Rock fragments	0.92
		Water erosion	0.99				
35D:							
Keener--------------	90	Fair		Poor		Poor	
		Too acid	0.20	Slope	0.00	Slope	0.00
		Organic matter content low	0.50			Too acid	0.76
						Rock fragments	0.92
		Water erosion	0.99				
36A:							
Kinkora-------------	90	Fair		Poor		Poor	
		Too clayey	0.08	Wetness depth	0.00	Wetness depth	0.00
		Organic matter content low	0.12	Low strength	0.00	Too clayey	0.05
				Shrink-swell	0.92	Hard to reclaim (rock fragments)	0.05
		Too acid	0.46				
37C:							
Konnarock-----------	90	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.05			Depth to bedrock	0.05
		Too acid	0.50			Too acid	0.59

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
37D:							
Konnarock-----------	90	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.05	Slope	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.05
37E:							
Konnarock-----------	90	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Depth to bedrock	0.05	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.05
38C:							
McCamy--------------	85	Poor		Poor		Fair	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.21
		Organic matter content low	0.12			Too acid	0.59
						Slope	0.63
		Depth to bedrock	0.21				
38D:							
McCamy--------------	85	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Depth to bedrock	0.21
						Too acid	0.59
		Depth to bedrock	0.21				
39D:							
McCamy--------------	85	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Depth to bedrock	0.21
						Too acid	0.59
		Depth to bedrock	0.21				
39E:							
McCamy--------------	85	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Depth to bedrock	0.00	Depth to bedrock	0.21
						Too acid	0.59
		Depth to bedrock	0.21				
40D:							
Mt Rogers-----------	45	Fair		Fair		Poor	
		Too acid	0.50	Slope	0.32	Hard to reclaim (rock fragments)	0.00
		Droughty	0.71	Cobble content	0.42		
		Cobble content	0.77			Rock fragments	0.00
						Slope	0.00
Bloodyhorse---------	25	Fair		Poor		Poor	
		Droughty	0.02	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50	Slope	0.32	Slope	0.00
		Depth to bedrock	0.97			Too acid	0.59
Rock outcrop--------	15	Not rated		Not rated		Not rated	
40F:							
Mt Rogers-----------	45	Fair		Poor		Poor	
		Too acid	0.50	Slope	0.00	Slope	0.00
		Droughty	0.71	Cobble content	0.42	Hard to reclaim (rock fragments)	0.00
		Cobble content	0.77				
						Rock fragments	0.00

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
40F:							
Bloodyhorse---------	25	Fair		Poor		Poor	
		Droughty	0.02	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.97			Too acid	0.59
Rock outcrop--------	15	Not rated		Not rated		Not rated	
41C:							
Mt Rogers-----------	45	Fair		Fair		Poor	
		Too acid	0.50	Cobble content	0.42	Hard to reclaim (rock fragments)	0.00
		Droughty	0.71			Rock fragments	0.00
		Cobble content	0.77			Too acid	0.59
Buzzrock------------	40	Poor		Fair		Poor	
		Droughty	0.00	Depth to bedrock	0.04	Hard to reclaim (rock fragments)	0.00
		Too acid	0.50	Cobble content	0.11	Rock fragments	0.00
		Cobble content	0.84			Too acid	0.59
41D:							
Mt Rogers-----------	45	Fair		Poor		Poor	
		Too acid	0.50	Slope	0.00	Slope	0.00
		Droughty	0.71	Cobble content	0.42	Hard to reclaim (rock fragments)	0.00
		Cobble content	0.77			Rock fragments	0.00
Buzzrock------------	40	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.04	Hard to reclaim (rock fragments)	0.00
		Cobble content	0.84	Cobble content	0.11	Rock fragments	0.00
42C:							
Peaks---------------	90	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Slope	0.63
		Too acid	0.50			Depth to bedrock	0.71
42D:							
Peaks---------------	90	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.71
42E:							
Peaks---------------	90	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.71
43C:							
Peaks---------------	90	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Slope	0.63
		Too acid	0.50			Depth to bedrock	0.71

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
43D:							
Peaks---------------	90	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Organic matter content low	0.12	Slope	0.00	Rock fragments	0.00
						Depth to bedrock	0.71
		Too acid	0.50				
43E:							
Peaks---------------	90	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Depth to bedrock	0.00	Rock fragments	0.00
						Depth to bedrock	0.71
		Too acid	0.50				
43F:							
Peaks---------------	90	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Depth to bedrock	0.00	Rock fragments	0.00
						Depth to bedrock	0.71
		Too acid	0.50				
44C:							
Pigeonroost---------	85	Fair		Poor		Fair	
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.63
				Low strength	0.00	Too acid	0.76
		Too acid	0.50			Depth to bedrock	0.97
		Water erosion	0.68				
44D:							
Pigeonroost---------	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.00
				Slope	0.00	Too acid	0.76
		Too acid	0.50	Low strength	0.00	Depth to bedrock	0.97
		Water erosion	0.68				
44E:							
Pigeonroost---------	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.00	Too acid	0.76
		Too acid	0.50	Low strength	0.00	Depth to bedrock	0.97
		Water erosion	0.68				
45D:							
Pigeonroost---------	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.00
				Low strength	0.00	Too acid	0.86
		Too acid	0.50	Slope	0.32	Depth to bedrock	0.97
		Water erosion	0.68				
45E:							
Pigeonroost---------	85	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Depth to bedrock	0.00	Too acid	0.76
		Too acid	0.50	Low strength	0.00	Depth to bedrock	0.97
		Water erosion	0.68				

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
46E:							
Pigeonroost---------	60	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Too acid	0.50	Depth to bedrock	0.00	Too acid	0.76
		Water erosion	0.68	Low strength	0.00	Depth to bedrock	0.97
Rock outcrop--------	30	Not rated		Not rated		Not rated	
47D:							
Pineola-------------	90	Fair		Poor		Poor	
		Organic matter content low	0.12	Depth to bedrock	0.00	Slope	0.00
		Droughty	0.23	Slope	0.00	Rock fragments	0.12
		Depth to bedrock	0.46	Low strength	0.22	Depth to bedrock	0.46
48E:							
Pineola-------------	90	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
		Droughty	0.23	Depth to bedrock	0.00	Rock fragments	0.12
		Depth to bedrock	0.46	Low strength	0.22	Depth to bedrock	0.46
49:							
Pits, quarries------	100	Not rated		Not rated		Not rated	
50F:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Peaks---------------	40	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Organic matter content low	0.12	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.71
51B:							
Scales--------------	95	Fair		Poor		Poor	
		Too acid	0.50	Wetness depth	0.00	Wetness depth	0.00
		Organic matter content low	0.88	Low strength	0.00	Too acid	0.59
						Rock fragments	0.95
52C:							
Sylco---------------	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.29			Depth to bedrock	0.29
		Too acid	0.50			Slope	0.63
Sylvatus------------	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Depth to bedrock	0.00
		Depth to bedrock	0.00			Rock fragments	0.00
		Too acid	0.50			Too acid	0.59
52D:							
Sylco---------------	50	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.29	Slope	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.29

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
52D:							
Sylvatus------------	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Too acid	0.50			Rock fragments	0.00
52E:							
Sylco---------------	50	Poor		Poor		Poor	
		Droughty	0.00	Slope	0.00	Slope	0.00
		Depth to bedrock	0.29	Depth to bedrock	0.00	Rock fragments	0.00
		Too acid	0.50			Depth to bedrock	0.29
Sylvatus------------	35	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Depth to bedrock	0.00
		Too acid	0.50			Rock fragments	0.00
53B:							
Tate----------------	90	Fair		Good		Fair	
		Organic matter content low	0.12			Too acid	0.95
		Too acid	0.46				
53C:							
Tate----------------	90	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.63
						Too acid	0.95
		Too acid	0.46				
53D:							
Tate----------------	90	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.50	Slope	0.00
						Too acid	0.95
		Too acid	0.46				
53E:							
Tate----------------	90	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
						Too acid	0.95
		Too acid	0.46				
54C:							
Tate----------------	90	Fair		Good		Fair	
		Organic matter content low	0.12			Slope	0.63
						Too acid	0.95
		Too acid	0.46				
54D:							
Tate----------------	90	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
						Too acid	0.95
		Too acid	0.46				
54E:							
Tate----------------	90	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
						Too acid	0.95
		Too acid	0.46				

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material: Rating class and limiting features	Value	Potential source of roadfill: Rating class and limiting features	Value	Potential source of topsoil: Rating class and limiting features	Value
55D:							
Tate	90	Fair		Fair		Poor	
		Organic matter content low	0.12	Slope	0.32	Slope	0.00
		Too acid	0.46			Too acid	0.95
56C:							
Thunder	80	Fair		Poor		Poor	
		Organic matter content low	0.12	Cobble content	0.00	Hard to reclaim (rock fragments)	0.00
		Cobble content	0.44			Rock fragments	0.00
		Too acid	0.46			Slope	0.63
56D:							
Thunder	80	Fair		Poor		Poor	
		Organic matter content low	0.12	Cobble content	0.00	Slope	0.00
				Slope	0.00	Hard to reclaim (rock fragments)	0.00
		Cobble content	0.44				
		Too acid	0.46			Rock fragments	0.00
56E:							
Thunder	80	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Cobble content	0.00	Hard to reclaim (rock fragments)	0.00
		Cobble content	0.44				
		Too acid	0.46			Rock fragments	0.00
57C:							
Thunder	80	Fair		Poor		Poor	
		Organic matter content low	0.12	Cobble content	0.00	Hard to reclaim (rock fragments)	0.00
		Cobble content	0.44			Rock fragments	0.00
		Too acid	0.46			Slope	0.63
57D:							
Thunder	80	Fair		Poor		Poor	
		Organic matter content low	0.12	Cobble content	0.00	Slope	0.00
				Slope	0.00	Hard to reclaim (rock fragments)	0.00
		Cobble content	0.44				
		Too acid	0.46			Rock fragments	0.00
57E:							
Thunder	80	Fair		Poor		Poor	
		Organic matter content low	0.12	Slope	0.00	Slope	0.00
				Cobble content	0.00	Hard to reclaim (rock fragments)	0.00
		Cobble content	0.44				
		Too acid	0.46			Rock fragments	0.00
58D:							
Udorthents	50	Not rated		Not rated		Not rated	
Urban land	35	Not rated		Not rated		Not rated	
59D:							
Unicoi	85	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Rock fragments	0.00
		Depth to bedrock	0.00	Slope	0.32	Depth to bedrock	0.00
		Organic matter content low	0.12			Slope	0.00

Table 13.—Construction Materials, Part II—Continued

Map symbol and soil name	Pct. of map unit	Potential source of reclamation material		Potential source of roadfill		Potential source of topsoil	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
59E:							
Unicoi---------------	85	Poor		Poor		Poor	
		Droughty	0.00	Depth to bedrock	0.00	Slope	0.00
		Depth to bedrock	0.00	Slope	0.00	Rock fragments	0.00
		Organic matter content low	0.12			Depth to bedrock	0.00
W:							
Water----------------	100	Not rated		Not rated		Not rated	

Table 14.—Water Management

(The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. The numbers in the value columns range from 0.01 to 1.00. The larger the value, the greater the limitation. See text for further explanation of ratings in this table)

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
1C:							
Balsam	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.84	Depth to water	1.00
		Slope	1.00	Seepage	0.25		
1D:							
Balsam	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.84	Depth to water	1.00
		Slope	1.00	Seepage	0.25		
1E:							
Balsam	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.84	Depth to water	1.00
		Slope	1.00	Seepage	0.25		
2D:							
Balsam	70	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.84	Depth to water	1.00
		Slope	1.00	Seepage	0.25		
Nopan	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
		Seepage	0.70	Seepage	0.03	Slow refill	0.30
2E:							
Balsam	70	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.84	Depth to water	1.00
		Slope	1.00				
			1.00	Seepage	0.25		
Nopan	20	Very limited		Very limited		Very limited	
		Slope	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
		Seepage	0.70	Seepage	0.03	Slow refill	0.30
3D:							
Bloodyhorse	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.61	Depth to water	1.00
		Slope	1.00	Seepage	0.53		
		Depth to bedrock	0.61				
4F:							
Bloodyhorse	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.61	Depth to water	1.00
		Slope	1.00	Seepage	0.53		
		Depth to bedrock	0.61				

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
5B:							
Braddock------------	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.81	Hard to pack	0.24	Depth to water	1.00
		Slope	0.32				
5C:							
Braddock------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.24	Depth to water	1.00
		Seepage	0.81				
5D:							
Braddock------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.24	Depth to water	1.00
		Seepage	0.81				
6E:							
Braddock------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Hard to pack	0.24	Depth to water	1.00
		Seepage	0.81				
7D:							
Brevard-------------	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.01	Depth to water	1.00
		Slope	1.00				
Greenlee------------	35	Very limited		Very limited		Very limited	
		Seepage	1.00	Large stones content	0.99	Depth to water	1.00
		Slope	1.00				
				Seepage	0.03		
8C:							
Burton--------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.95	Depth to water	1.00
		Slope	1.00	Seepage	0.05		
		Depth to bedrock	0.83				
9D:							
Burton--------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.95	Depth to water	1.00
		Slope	1.00	Seepage	0.05		
		Depth to bedrock	0.83				
9E:							
Burton--------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.95	Depth to water	1.00
		Slope	1.00	Seepage	0.05		
		Depth to bedrock	0.83				
10D:							
Peaks---------------	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	1.00	Thin layer	0.81		
		Depth to bedrock	0.81				
Chestnut------------	65	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.88	Depth to water	1.00
		Slope	1.00	Seepage	0.01		
		Depth to bedrock	0.26				

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
10E:							
Chestnut------------	65	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.88	Depth to water	1.00
		Slope	1.00	Seepage	0.01		
		Depth to bedrock	0.26				
Peaks---------------	20	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	1.00	Thin layer	0.81		
		Depth to bedrock	0.81				
11F:							
Chestnut------------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.88	Depth to water	1.00
		Slope	1.00	Seepage	0.01		
		Depth to bedrock	0.26				
Peaks---------------	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	1.00	Thin layer	0.81		
		Depth to bedrock	0.81				
Tuckasegee----------	20	Very limited		Not limited		Very limited	
		Seepage	1.00			Depth to water	1.00
		Slope	1.00				
12A:							
Codorus-------------	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Depth to saturated zone	1.00	Cutbanks cave	1.00
				Seepage	0.22		
13A:							
Comus---------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.07	Depth to water	1.00
14C:							
Cowee---------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.52	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.01				
14D:							
Cowee---------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.52	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.01				
14E:							
Cowee---------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.52	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.01				
15D:							
Cowee---------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.52	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.01				

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
15E:							
Cowee----------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.52	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.01				
16D:							
Cowee----------------	60	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.52	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.01				
Rock outcrop---------	35	Not rated		Not rated		Not rated	
16E:							
Cowee----------------	60	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.52	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.01				
Rock outcrop---------	35	Not rated		Not rated		Not rated	
17A:							
Craigsville----------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.41	Depth to water	1.00
				Seepage	0.22		
18C:							
Cullasaja------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.88	Depth to water	1.00
		Slope	1.00				
				Seepage	0.04		
18D:							
Cullasaja------------	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.88	Depth to water	1.00
		Slope	1.00				
				Seepage	0.04		
19A:							
Delanco--------------	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
						Cutbanks cave	0.10
				Seepage	0.03		
19B:							
Delanco--------------	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Depth to saturated zone	1.00	Slow refill	0.30
		Slope	0.32			Cutbanks cave	0.10
				Seepage	0.03		
20C:							
Delanco--------------	90	Very limited		Very limited		Somewhat limited	
		Slope	1.00	Depth to saturated zone	1.00	Slow refill	0.30
		Seepage	0.70			Cutbanks cave	0.10
				Seepage	0.03		

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
21B:							
Edneytown-----------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.11	Depth to water	1.00
		Slope	0.32				
21C:							
Edneytown-----------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.11	Depth to water	1.00
		Slope	1.00				
21D:							
Edneytown-----------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.11	Depth to water	1.00
		Slope	1.00				
21E:							
Edneytown-----------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.11	Depth to water	1.00
		Slope	1.00				
21F:							
Edneytown-----------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.11	Depth to water	1.00
		Slope	1.00				
22C:							
Edneytown-----------	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.11	Depth to water	1.00
		Slope	1.00				
Urban land----------	35	Not rated		Not rated		Not rated	
23C:							
Edneyville----------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
		Slope	1.00				
23D:							
Edneyville----------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
		Slope	1.00				
23E:							
Edneyville----------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
		Slope	1.00				
24D:							
Edneyville----------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
		Slope	1.00				
24E:							
Edneyville----------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
		Slope	1.00				

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
24F:							
Edneyville----------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.03	Depth to water	1.00
		Slope	1.00				
25B:							
Elsinboro-----------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.45	Depth to water	1.00
		Slope	0.32	Seepage	0.04		
26B:							
Elsinboro-----------	60	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.45	Depth to water	1.00
		Slope	0.08	Seepage	0.04		
Urban land----------	35	Not rated		Not rated		Not rated	
27D:							
Evard---------------	50	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.01	Depth to water	1.00
		Seepage	1.00				
Cowee---------------	35	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.52	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.01				
28B:							
Glenelg-------------	90	Somewhat limited		Somewhat limited		Very limited	
		Seepage	0.70	Seepage	0.02	Depth to water	1.00
		Slope	0.32				
28C:							
Glenelg-------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.02	Depth to water	1.00
		Seepage	0.70				
28D:							
Glenelg-------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.02	Depth to water	1.00
		Seepage	0.70				
28E:							
Glenelg-------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.02	Depth to water	1.00
		Seepage	0.70				
28F:							
Glenelg-------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.02	Depth to water	1.00
		Seepage	0.70				
29C:							
Glenelg-------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.02	Depth to water	1.00
		Seepage	0.70				

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
29D:							
Glenelg-------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.02	Depth to water	1.00
		Seepage	0.70				
29E:							
Glenelg-------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.02	Depth to water	1.00
		Seepage	0.70				
30C:							
Glenelg-------------	60	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Seepage	0.02	Depth to water	1.00
		Seepage	0.70				
Urban land----------	35	Not rated		Not rated		Not rated	
31D:							
Greenlee------------	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Large stones content	0.99	Depth to water	1.00
		Slope	1.00				
				Seepage	0.03		
31E:							
Greenlee------------	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Large stones content	0.99	Depth to water	1.00
		Slope	1.00				
				Seepage	0.03		
32A:							
Hatboro-------------	90	Somewhat limited		Very limited		Somewhat limited	
		Seepage	0.70	Ponding	1.00	Cutbanks cave	0.50
				Depth to saturated zone	1.00	Slow refill	0.30
				Piping	0.44		
33B:							
Hayesville----------	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	0.32	Seepage	0.03		
33C:							
Hayesville----------	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
33D:							
Hayesville----------	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
34B:							
Keener--------------	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Piping	0.99	Depth to water	1.00
		Slope	0.32				
34C:							
Keener--------------	90	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	0.99	Depth to water	1.00
		Seepage	1.00				

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
34D:							
Keener	90	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	0.99	Depth to water	1.00
		Seepage	1.00				
35C:							
Keener	90	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	0.99	Depth to water	1.00
		Seepage	1.00				
35D:							
Keener	90	Very limited		Very limited		Very limited	
		Slope	1.00	Piping	0.99	Depth to water	1.00
		Seepage	1.00				
36A:							
Kinkora	90	Very limited		Very limited		Very limited	
		Seepage	1.00	Ponding	1.00	Cutbanks cave	1.00
				Depth to saturated zone	1.00		
				Seepage	0.11		
37C:							
Konnarock	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.99	Depth to water	1.00
		Slope	1.00	Seepage	0.53		
		Depth to bedrock	0.99				
37D:							
Konnarock	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.99	Depth to water	1.00
		Slope	1.00	Seepage	0.53		
		Depth to bedrock	0.99				
37E:							
Konnarock	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.99	Depth to water	1.00
		Slope	1.00	Seepage	0.53		
		Depth to bedrock	0.99				
38C:							
McCamy	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.95	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
		Depth to bedrock	0.83				
38D:							
McCamy	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.95	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
		Depth to bedrock	0.83				
39D:							
McCamy	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.95	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
		Depth to bedrock	0.83				

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
39E:							
McCamy	85	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.95	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
		Depth to bedrock	0.83				
40D:							
Mt Rogers	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.12	Depth to water	1.00
		Slope	1.00	Large stones content	0.01		
Bloodyhorse	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.61	Depth to water	1.00
		Slope	1.00	Seepage	0.53		
		Depth to bedrock	0.61				
Rock outcrop	15	Not rated		Not rated		Not rated	
40F:							
Mt Rogers	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.12	Depth to water	1.00
		Slope	1.00	Large stones content	0.01		
Bloodyhorse	25	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.61	Depth to water	1.00
		Slope	1.00	Seepage	0.53		
		Depth to bedrock	0.61				
Rock outcrop	15	Not rated		Not rated		Not rated	
41C:							
Mt Rogers	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.12	Depth to water	1.00
		Slope	1.00	Large stones content	0.01		
Buzzrock	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	0.37		
		Depth to bedrock	0.37	Large stones content	0.09		
41D:							
Mt Rogers	45	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.12	Depth to water	1.00
		Slope	1.00	Large stones content	0.01		
Buzzrock	40	Very limited		Very limited		Very limited	
		Seepage	1.00	Seepage	1.00	Depth to water	1.00
		Slope	1.00	Thin layer	0.37		
		Depth to bedrock	0.37	Large stones content	0.09		

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
42C:							
Peaks----------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	1.00	Thin layer	0.81		
		Depth to bedrock	0.81				
42D:							
Peaks----------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	1.00	Thin layer	0.81		
		Depth to bedrock	0.81				
42E:							
Peaks----------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	1.00	Thin layer	0.81		
		Depth to bedrock	0.81				
43C:							
Peaks----------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	1.00	Thin layer	0.81		
		Depth to bedrock	0.81				
43D:							
Peaks----------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	1.00	Thin layer	0.81		
		Depth to bedrock	0.81				
43E:							
Peaks----------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	1.00	Thin layer	0.81		
		Depth to bedrock	0.81				
43F:							
Peaks----------------	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	1.00	Thin layer	0.81		
		Depth to bedrock	0.81				
44C:							
Pigeonroost----------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.67	Depth to water	1.00
		Seepage	0.70	Thin layer	0.61		
		Depth to bedrock	0.02	Seepage	0.03		
44D:							
Pigeonroost----------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.67	Depth to water	1.00
		Seepage	0.70	Thin layer	0.61		
		Depth to bedrock	0.02	Seepage	0.03		
44E:							
Pigeonroost----------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.67	Depth to water	1.00
		Seepage	0.70	Thin layer	0.61		
		Depth to bedrock	0.02	Seepage	0.03		

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
45D:							
Pigeonroost---------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.67	Depth to water	1.00
		Seepage	0.70	Thin layer	0.61		
		Depth to bedrock	0.02	Seepage	0.03		
45E:							
Pigeonroost---------	85	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.67	Depth to water	1.00
		Seepage	0.70	Thin layer	0.61		
		Depth to bedrock	0.02	Seepage	0.03		
46E:							
Pigeonroost---------	60	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Piping	0.67	Depth to water	1.00
		Seepage	0.70	Thin layer	0.61		
		Depth to bedrock	0.02	Seepage	0.03		
Rock outcrop--------	30	Not rated		Not rated		Not rated	
47D:							
Pineola-------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.88	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.13				
48E:							
Pineola-------------	90	Very limited		Somewhat limited		Very limited	
		Slope	1.00	Thin layer	0.88	Depth to water	1.00
		Seepage	0.70	Seepage	0.03		
		Depth to bedrock	0.13				
49:							
Pits, quarries------	100	Not rated		Not rated		Not rated	
50F:							
Rock outcrop--------	50	Not rated		Not rated		Not rated	
Peaks---------------	40	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Seepage	0.82	Depth to water	1.00
		Slope	1.00	Thin layer	0.81		
		Depth to bedrock	0.81				
51B:							
Scales--------------	95	Somewhat limited		Very limited		Very limited	
		Slope	0.08	Depth to saturated zone	1.00	Cutbanks cave	1.00
		Seepage	0.01				
52C:							
Sylco---------------	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	1.00	Seepage	0.57		
		Depth to bedrock	0.93				
Sylvatus------------	35	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.57		

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas		Embankments, dikes, and levees		Aquifer-fed excavated ponds	
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
52D:							
Sylco	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	1.00	Seepage	0.57		
		Depth to bedrock	0.93				
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.57		
52E:							
Sylco	50	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Thin layer	0.93	Depth to water	1.00
		Slope	1.00	Seepage	0.57		
		Depth to bedrock	0.93				
Sylvatus	35	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.57		
53B:							
Tate	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.70	Depth to water	1.00
		Slope	0.32	Seepage	0.03		
53C:							
Tate	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.70	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
53D:							
Tate	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.70	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
53E:							
Tate	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.70	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
54C:							
Tate	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.70	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
54D:							
Tate	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.70	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
54E:							
Tate	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.70	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
55D:							
Tate	90	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Piping	0.70	Depth to water	1.00
		Slope	1.00	Seepage	0.03		

Table 14.—Water Management—Continued

Map symbol and soil name	Pct. of map unit	Pond reservoir areas: Rating class and limiting features	Value	Embankments, dikes, and levees: Rating class and limiting features	Value	Aquifer-fed excavated ponds: Rating class and limiting features	Value
56C:							
Thunder	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.42	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
56D:							
Thunder	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.42	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
56E:							
Thunder	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.42	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
57C:							
Thunder	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.42	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
57D:							
Thunder	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.42	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
57E:							
Thunder	80	Very limited		Somewhat limited		Very limited	
		Seepage	1.00	Large stones content	0.42	Depth to water	1.00
		Slope	1.00	Seepage	0.03		
58D:							
Udorthents	50	Not rated		Not rated		Not rated	
Urban land	35	Not rated		Not rated		Not rated	
59D:							
Unicoi	85	Very limited		Very limited		Very limited	
		Depth to bedrock	1.00	Thin layer	1.00	Depth to water	1.00
		Slope	1.00	Seepage	0.38		
59E:							
Unicoi	85	Very limited		Very limited		Very limited	
		Slope	1.00	Thin layer	1.00	Depth to water	1.00
		Depth to bedrock	1.00	Seepage	0.38		
W:							
Water	100	Not rated		Not rated		Not rated	

Table 15.—Engineering Soil Properties

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
1C:												
Balsam----------	0-19	Cobbly loam	GM, OH, SM	A-5, A-2, A-7	0	35-45	70-85	65-85	55-85	35-65	33-79	1-17
	19-35	Very cobbly loam, cobbly sandy clay loam, very cobbly sandy loam	GM, SC-SM, ML	A-1, A-4, A-7	0	30-50	55-90	50-90	40-90	25-70	17-47	1-18
	35-48	Extremely cobbly loam, cobbly sandy clay loam, very cobbly sandy loam	CL, GM, GC-GM	A-1, A-2, A-7	0	30-50	50-90	50-90	40-90	25-70	16-41	1-19
	48-62	Extremely cobbly sandy loam, very cobbly loam, extremely cobbly fine sandy loam, very stony loamy sand	GM, GP-GM, GC	A-1, A-2	0-10	35-55	20-80	20-80	15-70	5-40	0-28	NP-10
1D:												
Balsam----------	0-19	Cobbly loam	GM, OH, SM	A-5, A-2, A-7	0	35-45	70-85	65-85	55-85	35-65	33-79	1-17
	19-35	Very cobbly loam, cobbly sandy clay loam, very cobbly sandy loam	GM, SC-SM, ML	A-1, A-4, A-7	0	30-50	55-90	50-90	40-90	25-70	17-47	1-18
	35-48	Extremely cobbly loam, cobbly sandy clay loam, very cobbly sandy loam	CL, GM, GC-GM	A-1, A-2, A-7	0	30-50	50-90	50-90	40-90	25-70	16-41	1-19
	48-62	Extremely cobbly sandy loam, very cobbly loam, extremely cobbly fine sandy loam, very stony loamy sand	GM, GP-GM, GC	A-1, A-2	0-10	35-55	20-80	20-80	15-70	5-40	0-28	NP-10
1E:												
Balsam----------	0-19	Cobbly loam	GM, OH, SM	A-5, A-2, A-7	0	35-45	70-85	65-85	55-85	35-65	33-79	1-17
	19-35	Very cobbly loam, cobbly sandy clay loam, very cobbly sandy loam	GM, SC-SM, ML	A-1, A-4, A-7	0	30-50	55-90	50-90	40-90	25-70	17-47	1-18
	35-48	Extremely cobbly loam, cobbly sandy clay loam, very cobbly sandy loam	CL, GM, GC-GM	A-1, A-2, A-7	0	30-50	50-90	50-90	40-90	25-70	16-41	1-19
	48-62	Extremely cobbly sandy loam, very cobbly loam, extremely cobbly fine sandy loam, very stony loamy sand	GM, GP-GM, GC	A-1, A-2	0-10	35-55	20-80	20-80	15-70	5-40	0-28	NP-10

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
2D:												
Balsam----------	0-19	Cobbly loam	GM, OH, SM	A-5, A-2, A-7	0	35-45	70-85	65-85	55-85	35-65	33-79	1-17
	19-35	Very cobbly loam, cobbly sandy clay loam, very cobbly sandy loam	GM, SC-SM, ML	A-1, A-4, A-7	0	30-50	55-90	50-90	40-90	25-70	17-47	1-18
	35-48	Extremely cobbly loam, cobbly sandy clay loam, very cobbly sandy loam	CL, GM, GC-GM	A-1, A-2, A-7	0	30-50	50-90	50-90	40-90	25-70	16-41	1-19
	48-62	Extremely cobbly sandy loam, very cobbly loam, extremely cobbly fine sandy loam, very stony loamy sand	GM, GP-GM, GC	A-1, A-2	0-10	35-55	20-80	20-80	15-70	5-40	0-28	NP-10
Nopan-----------	0-6	Loam	GM, OH	A-1, A-5, A-7	0	0-20	45-100	40-100	35-95	25-70	40-83	3-11
	6-17	Loam, sandy loam, gravelly loamy sand	CL-ML, GM, ML	A-2, A-4	0	0-15	55-100	55-100	45-95	30-70	9-23	NP-6
	17-33	Loamy sand, loam, gravelly sandy loam	GP-GM, SC-SM, SM	A-1, A-2	0	0-15	55-100	55-100	40-90	10-35	9-23	NP-6
	33-50	Sandy loam, loam, gravelly loamy sand	GM, SC-SM, SM	A-1, A-2, A-4	0	0-15	60-100	60-100	40-85	20-50	9-23	NP-6
	50-62	Sandy loam, loam, gravelly loamy sand	SC-SM, SM	A-1, A-2, A-4	0-10	0-15	65-100	65-100	45-85	20-50	9-23	NP-6
2E:												
Balsam----------	0-19	Cobbly loam	GM, OH, SM	A-5, A-2, A-7	0	35-45	70-85	65-85	55-85	35-65	33-79	1-17
	19-35	Very cobbly loam, cobbly sandy clay loam, very cobbly sandy loam	GM, SC-SM, ML	A-1, A-4, A-7	0	30-50	55-90	50-90	40-90	25-70	17-47	1-18
	35-48	Extremely cobbly loam, cobbly sandy clay loam, very cobbly sandy loam	CL, GM, GC-GM	A-1, A-2, A-7	0	30-50	50-90	50-90	40-90	25-70	16-41	1-19
	48-62	Extremely cobbly sandy loam, very cobbly loam, extremely cobbly fine sandy loam, very stony loamy sand	GM, GP-GM, GC	A-1, A-2	0-10	35-55	20-80	20-80	15-70	5-40	0-28	NP-10
Nopan-----------	0-6	Loam	GM, OH	A-1, A-5, A-7	0	0-20	45-100	40-100	35-95	25-70	40-83	3-11
	6-17	Loam, sandy loam, gravelly loamy sand	CL-ML, GM, ML	A-2, A-4	0	0-15	55-100	55-100	45-95	30-70	9-23	NP-6
	17-33	Loamy sand, loam, gravelly sandy loam	GP-GM, SC-SM, SM	A-1, A-2	0	0-15	55-100	55-100	40-90	10-35	9-23	NP-6
	33-50	Sandy loam, loam, gravelly loamy sand	GM, SC-SM, SM	A-1, A-2, A-4	0	0-15	60-100	60-100	40-85	20-50	9-23	NP-6
	50-62	Sandy loam, loam, gravelly loamy sand	SC-SM, SM	A-1, A-2, A-4	0-10	0-15	65-100	65-100	45-85	20-50	9-23	NP-6

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
3D:												
Bloodyhorse-----	0-12	Gravelly loam	GM	A-1, A-2, A-7	0	0-10	40-55	35-55	30-55	20-40	35-77	3-16
	12-28	Very gravelly loam, extremely gravelly sandy loam, very stony silt loam, very cobbly fine sandy loam	GC, GC-GM, GP	A-1, A-2	0-15	0-15	15-50	10-50	5-50	4-35	12-30	NP-10
	28-37	Extremely gravelly loam, very gravelly sandy loam, very stony silt loam, very cobbly fine sandy loam	GC, GC-GM, GP	A-1, A-2	0-15	0-15	15-40	10-35	5-35	4-25	12-30	NP-10
	37-47	Bedrock			---	---	---	---	---	---	---	---
4F:												
Bloodyhorse-----	0-12	Gravelly loam	GM	A-1, A-2, A-7	0	0-10	40-55	35-55	30-55	20-40	35-77	3-16
	12-28	Very gravelly loam, extremely gravelly sandy loam, very stony silt loam, very cobbly fine sandy loam	GC, GC-GM, GP	A-1, A-2	0-15	0-15	15-50	10-50	5-50	4-35	12-30	NP-10
	28-37	Extremely gravelly loam, very gravelly sandy loam, very stony silt loam, very cobbly fine sandy loam	GC, GC-GM, GP	A-1, A-2	0-15	0-15	15-40	10-35	5-35	4-25	12-30	NP-10
	37-47	Bedrock			---	---	---	---	---	---	---	---
5B:												
Braddock--------	0-8	Loam	CL, SC	A-6, A-4	0	0-10	80-100	80-100	65-95	45-95	22-39	6-17
	8-15	Clay loam, clay, gravelly sandy clay loam	CL, SC	A-6	0	0-10	65-100	65-100	55-100	45-95	36-58	18-36
	15-51	Clay, sandy clay, gravelly clay loam, silty clay loam	CH, CL, GC, SC	A-7	0	0-10	65-100	65-100	55-100	45-90	43-63	25-40
	51-62	Clay loam, clay, very cobbly silty clay loam, gravelly sandy clay	CL, CH, GC, SC	A-7	0-10	0-20	60-100	60-100	55-100	45-90	43-59	25-36

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
5C:												
Braddock--------	0-8	Loam	CL, SC	A-6, A-4	0	0-10	80-100	80-100	65-95	45-95	22-39	6-17
	8-15	Clay loam, clay, gravelly sandy clay loam	CL, SC	A-6	0	0-10	65-100	65-100	55-100	45-95	36-58	18-36
	15-51	Clay, sandy clay, gravelly clay loam, silty clay loam	CH, CL, GC, SC	A-7	0	0-10	65-100	65-100	55-100	45-90	43-63	25-40
	51-62	Clay loam, clay, very cobbly silty clay loam, gravelly sandy clay	CL, CH, GC, SC	A-7	0-10	0-20	60-100	60-100	55-100	45-90	43-59	25-36
5D:												
Braddock--------	0-8	Loam	CL, SC	A-6, A-4	0	0-10	80-100	80-100	65-95	45-95	22-39	6-17
	8-15	Clay loam, clay, gravelly sandy clay loam	CL, SC	A-6	0	0-10	65-100	65-100	55-100	45-95	36-58	18-36
	15-51	Clay, sandy clay, gravelly clay loam, silty clay loam	CH, CL, GC, SC	A-7	0	0-10	65-100	65-100	55-100	45-90	43-63	25-40
	51-62	Clay loam, clay, very cobbly silty clay loam, gravelly sandy clay	CL, CH, GC, SC	A-7	0-10	0-20	60-100	60-100	55-100	45-90	43-59	25-36
6E:												
Braddock--------	0-8	Cobbly loam	CL	A-6, A-4	0	20-30	90-100	90-100	70-95	50-75	22-39	6-17
	8-15	Cobbly clay loam, cobbly clay, cobbly sandy clay loam	CL	A-6	0	20-30	90-100	90-100	80-100	60-95	36-58	18-36
	15-51	Clay, cobbly sandy clay, cobbly clay loam, silty clay loam	CH, CL	A-7	0	0-30	80-100	80-100	65-100	55-90	43-63	25-40
	51-62	Clay loam, very cobbly clay, cobbly silty clay loam, gravelly sandy clay	CL, CH	A-7	0-10	0-30	65-100	65-100	60-100	50-90	43-59	25-36

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
7D:												
Bravard----------	0-8	Gravelly fine sandy loam, gravelly sandy loam, gravelly loam, very gravelly fine sandy loam	ML, SC-SM, SM, SP-SM, CL-ML	A-1, A-2, A-4	0-30	0-50	50-100	25-85	15-75	10-55	12-25	NP-7
	8-48	Gravelly sandy clay loam, cobbly clay loam, loam	CL, CL-ML, SC, SC-SM	A-1, A-2, A-4, A-6	0	0-30	70-100	35-100	30-100	15-80	23-38	6-14
	48-60	Very gravelly fine sandy loam, very cobbly loam, gravelly sandy loam, cobbly loamy fine sand	GM, GC, GC-GM, SM, GP-GM, GP-GC	A-1, A-2-4, A-3, A-4	0	5-30	40-80	20-75	15-70	5-55	12-30	NP-10
Greenlee---------	0-7	Very cobbly loam	SM, SC, SC-SM, ML, CL, CL-ML	A-4	0	37-48	65-75	55-75	45-75	30-60	15-30	2-11
	7-53	Very cobbly sandy loam, very cobbly loam, very cobbly sandy clay loam	SM, SC, SC-SM, ML, CL, CL-ML	A-1, A-2-4, A-4	0	36-51	65-85	55-80	35-75	20-60	10-30	NP-11
	53-62	Extremely cobbly sandy loam, very cobbly loam, extremely cobbly sand	SM, SC-SM, SP, SP-SM, ML, CL-ML	A-1, A-2-4, A-4	0	36-65	55-85	40-80	20-75	2-60	8-23	NP-7
8C:												
Burton-----------	0-13	Loam	OH, ML	A-5, A-7, A-4	0	0-15	90-100	85-100	70-95	50-70	38-75	5-14
	13-21	Loam, gravelly fine sandy loam, cobbly sandy loam	CL, GC, ML	A-2, A-6, A-7	0	0-15	60-100	60-100	50-95	35-70	26-45	9-17
	21-26	Very gravelly sandy loam, loam, cobbly fine sandy loam, very gravelly loamy sand	GC, GP-GM, SC	A-1, A-2, A-6	0	0-15	45-100	40-100	25-85	10-45	16-37	2-17
	26-31	Bedrock			---	---	---	---	---	---	---	---
	31-42	Bedrock			---	---	---	---	---	---	---	---
9D:												
Burton-----------	0-13	Loam	OH, ML	A-5, A-7, A-4	0	0-15	90-100	85-100	70-95	50-70	38-75	5-14
	13-21	Loam, gravelly fine sandy loam, cobbly sandy loam	CL, GC, ML	A-2, A-6, A-7	0	0-15	60-100	60-100	50-95	35-70	26-45	9-17
	21-26	Very gravelly sandy loam, loam, cobbly fine sandy loam, very gravelly loamy sand	GC, GP-GM, SC	A-1, A-2, A-6	0	0-15	45-100	40-100	25-85	10-45	16-37	2-17
	26-31	Bedrock			---	---	---	---	---	---	---	---
	31-42	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
9E:												
Burton----------	0-13	Loam	OH, ML	A-5, A-7, A-4	0	0-15	90-100	85-100	70-95	50-70	38-75	5-14
	13-21	Loam, gravelly fine sandy loam, cobbly sandy loam	CL, GC, ML	A-2, A-6, A-7	0	0-15	60-100	60-100	50-95	35-70	26-45	9-17
	21-26	Very gravelly sandy loam, loam, cobbly fine sandy loam, very gravelly loamy sand	GC, GP-GM, SC	A-1, A-2, A-6	0	0-15	45-100	40-100	25-85	10-45	16-37	2-17
	26-31	Bedrock			---	---	---	---	---	---	---	---
	31-42	Bedrock			---	---	---	---	---	---	---	---
10D:												
Peaks-----------	0-4	Very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-50	25-50	20-45	15-30	20-36	3-10
	4-8	Very gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-4	0	0	30-75	25-75	20-70	15-50	15-28	1-10
	8-23	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0	25-50	25-50	20-45	15-35	16-30	2-12
	23-32	Extremely gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, extremely gravelly loamy sand	GC, GP-GC, GP-GM	A-1, A-2	0	0	15-50	10-50	10-40	5-20	16-30	2-12
	32-42	Bedrock			---	---	---	---	---	---	---	---
Chestnut--------	0-3	Gravelly fine sandy loam, gravelly sandy loam, gravelly loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4, A-2	0-5	0-15	65-85	45-85	35-80	30-50	12-25	NP-7
	3-21	Gravelly fine sandy loam, gravelly sandy loam, gravelly loam, sandy loam, fine sandy loam, loam	CL-ML, SC-SM, SM, ML	A-2-4, A-1, A-4, A-2	0-5	0-15	85-100	45-90	25-85	25-50	12-25	NP-7
	21-29	Gravelly fine sandy loam, gravelly sandy loam, gravelly loam, cobbly loamy fine sand, gravelly loamy sand	CL-ML, ML, SM, SC-SM	A-2-4, A-1, A-4, A-2	0-5	0-30	85-95	45-85	25-80	25-50	12-25	NP-7
	29-45	Weathered bedrock			---	---	---	---	---	---	---	---
	45-80	Unweathered bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
10E:												
Chestnut--------	0-3	Gravelly fine sandy loam, gravelly sandy loam, gravelly loam	CL-ML, ML, SC-SM, SM	A-2-4, A-4, A-2	0-5	0-15	65-85	45-85	35-80	30-50	12-25	NP-7
	3-21	Gravelly fine sandy loam, gravelly sandy loam, gravelly loam, sandy loam, fine sandy loam, loam	SM, ML, CL-ML, SC-SM	A-2-4, A-1, A-4, A-2	0-5	0-15	85-100	45-90	25-85	25-50	12-25	NP-7
	21-29	Gravelly fine sandy loam, gravelly sandy loam, gravelly loam, cobbly loamy fine sand, gravelly loamy sand	SC-SM, CL-ML, SM, ML	A-2-4, A-1, A-4, A-2	0-5	0-30	85-95	45-85	25-80	25-50	12-25	NP-7
	29-45	Weathered bedrock			---	---	---	---	---	---	---	---
	45-80	Unweathered bedrock			---	---	---	---	---	---	---	---
Peaks-----------	0-4	Very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-50	25-50	20-45	15-30	20-36	3-10
	4-8	Very gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-4	0	0	30-75	25-75	20-70	15-50	15-28	1-10
	8-23	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0	25-50	25-50	20-45	15-35	16-30	2-12
	23-32	Extremely gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, extremely gravelly loamy sand	GC, GP-GC, GP-GM	A-1, A-2	0	0	15-50	10-50	10-40	5-20	16-30	2-12
	32-42	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
11F:												
Chestnut--------	0-3	Gravelly fine sandy loam, gravelly sandy loam, gravelly loam	SM, CL-ML, ML, SC-SM	A-2-4, A-4, A-2	0-5	0-15	65-85	45-85	35-80	30-50	12-25	NP-7
	3-21	Gravelly fine sandy loam, gravelly sandy loam, gravelly loam, sandy loam, fine sandy loam, loam	SM, ML, SC-SM, CL-ML	A-2-4, A-1, A-4, A-2	0-5	0-15	85-100	45-90	25-85	25-50	12-25	NP-7
	21-29	Gravelly fine sandy loam, gravelly sandy loam, gravelly loam, cobbly loamy fine sand, gravelly loamy sand	SM, CL-ML, ML, SC-SM	A-2-4, A-1, A-4, A-2	0-5	0-30	85-95	45-85	25-80	25-50	12-25	NP-7
	29-45	Weathered bedrock			---	---	---	---	---	---	---	---
	45-80	Unweathered bedrock			---	---	---	---	---	---	---	---
Peaks-----------	0-4	Very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-50	25-50	20-45	15-30	20-36	3-10
	4-8	Very gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-4	0	0	30-75	25-75	20-70	15-50	15-28	1-10
	8-23	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0	25-50	25-50	20-45	15-35	16-30	2-12
	23-32	Extremely gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, extremely gravelly loamy sand	GC, GP-GC, GP-GM	A-1, A-2	0	0	15-50	10-50	10-40	5-20	16-30	2-12
	32-42	Bedrock			---	---	---	---	---	---	---	---
Tuckasegee------	0-13	Gravelly loam, gravelly sandy loam, gravelly fine sandy loam	CL-ML, SM, SC-SM, ML	A-1, A-2, A-4	0-1	0-15	70-85	60-80	30-75	20-60	12-25	NP-7
	13-47	Gravelly loam, cobbly fine sandy loam, sandy loam, sandy clay loam	SC, CL, CL-ML, ML, SC-SM, SM	A-4, A-2	0-1	0-15	75-100	65-95	55-90	35-65	15-30	2-10
	47-79	Very gravelly loam, gravelly loamy sand, cobbly fine sandy loam, very cobbly loamy fine sand, sandy loam	CL-ML, SC-SM, ML, SM, GM, GC-GM	A-4, A-2	0-1	2-15	65-100	40-75	35-70	30-60	12-25	NP-7

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
12A:												
Codurus---------	0-7	Loam	CL, SC	A-6, A-7, A-4	0	0	75-100	70-100	60-95	45-70	29-43	9-17
	7-19	Loam, silt loam, silty clay loam, clay loam	CL, SC	A-6, A-7	0	0	75-100	70-100	60-100	45-80	27-44	12-25
	19-37	Loam, silt loam, silty clay loam, clay loam	SC, CL	A-6, A-7	0	0	75-100	70-100	60-100	45-80	27-44	12-25
	37-49	Gravelly sandy loam, loam, silt loam, silty clay loam, clay loam	SC, CL, SC-SM	A-2, A-7, A-1	0	0	60-100	60-100	40-95	15-60	20-44	6-25
	49-62	Very gravelly sandy loam, gravelly loam, silt loam, silty clay loam, clay loam	CL, GC, GP-GC	A-2, A-7, A-1	0	0	20-100	15-100	10-95	5-60	20-44	6-25
13A:												
Comus-----------	0-9	Fine sandy loam	SC-SM, SM	A-2, A-4, A-6	0	0-5	80-100	75-100	65-95	25-45	18-37	2-12
	9-31	Fine sandy loam, loam, silt loam	SM, SC, SC-SM	A-2, A-4, A-6	0	0-5	80-100	75-100	65-95	25-45	16-30	2-12
	31-53	Fine sandy loam, silt loam, gravelly loam, very gravelly sandy loam	GM, SC, SC-SM	A-1, A-4, A-6	0	0-15	55-100	50-100	45-95	15-45	16-30	2-12
	53-62	Gravelly loamy sand, silt loam, very gravelly loam, cobbly sandy loam, very gravelly loamy fine sand	SC, GM, SM	A-1, A-2, A-6	0	0-15	55-100	50-100	40-90	15-45	0-30	NP-12
14C:												
Cowee-----------	0-6	Loam	CL-ML, SM	A-4	0	0-10	80-100	80-100	65-90	45-65	14-25	1-7
	6-27	Clay loam, loam, sandy clay loam, gravelly fine sandy loam, gravelly sandy loam	CL, GC-GM	A-6, A-2	0-10	0-10	60-100	60-100	45-95	35-80	23-38	6-14
	27-39	Gravelly sandy loam, gravelly fine sandy loam, loam	SC-SM, GM, SC	A-1, A-4	0-10	0-10	60-100	60-100	40-90	20-50	16-30	2-10
	39-45	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
14D:												
Cowee-----------	0-6	Loam	CL-ML, SM	A-4	0	0-10	80-100	80-100	65-90	45-65	14-25	1-7
	6-27	Clay loam, loam, sandy clay loam, gravelly fine sandy loam, gravelly sandy loam	CL, GC-GM	A-6, A-2	0-10	0-10	60-100	60-100	45-95	35-80	23-38	6-14
	27-39	Gravelly sandy loam, gravelly fine sandy loam, loam	SC-SM, GM, SC	A-1, A-4	0-10	0-10	60-100	60-100	40-90	20-50	16-30	2-10
	39-45	Bedrock			---	---	---	---	---	---	---	---
14E:												
Cowee-----------	0-6	Loam	CL-ML, SM	A-4	0	0-10	80-100	80-100	65-90	45-65	14-25	1-7
	6-27	Clay loam, loam, sandy clay loam, gravelly fine sandy loam, gravelly sandy loam	CL, GC-GM	A-6, A-2	0-10	0-10	60-100	60-100	45-95	35-80	23-38	6-14
	27-39	Gravelly sandy loam, gravelly fine sandy loam, loam	SC-SM, GM, SC	A-1, A-4	0-10	0-10	60-100	60-100	40-90	20-50	16-30	2-10
	39-45	Bedrock			---	---	---	---	---	---	---	---
15D:												
Cowee-----------	0-6	Gravelly loam	GC-GM, GM, CL-ML	A-2, A-4	0-10	0-10	60-100	55-100	45-90	30-65	14-25	1-7
	6-27	Gravelly clay loam, loam, sandy clay loam, gravelly fine sandy loam, gravelly sandy loam	GC, GC-GM, CL	A-6, A-2	0-10	0-10	60-100	55-100	45-95	35-80	23-38	6-14
	27-39	Gravelly sandy loam, gravelly fine sandy loam, loam	SC-SM, GM, SC	A-1, A-4	0-10	0-10	60-100	60-100	40-90	20-50	16-30	2-10
	39-45	Bedrock			---	---	---	---	---	---	---	---
15E:												
Cowee-----------	0-6	Gravelly loam	GC-GM, GM, CL-ML	A-2, A-4	0-10	0-10	60-100	55-100	45-90	30-65	14-25	1-7
	6-27	Gravelly clay loam, loam, sandy clay loam, gravelly fine sandy loam, gravelly sandy loam	GC, GC-GM, CL	A-6, A-2	0-10	0-10	60-100	55-100	45-95	35-80	23-38	6-14
	27-39	Gravelly sandy loam, gravelly fine sandy loam, loam	SC-SM, GM, SC	A-1, A-4	0-10	0-10	60-100	60-100	40-90	20-50	16-30	2-10
	39-45	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
16D:												
Cowee	0-6	Loam	CL-ML, SM	A-4	0	0-10	80-100	80-100	65-90	45-65	14-25	1-7
	6-27	Clay loam, loam, sandy clay loam, gravelly fine sandy loam, gravelly sandy loam	CL, GC-GM	A-6, A-2	0-10	0-10	60-100	60-100	45-95	35-80	23-38	6-14
	27-39	Gravelly sandy loam, gravelly fine sandy loam, loam	SC-SM, GM, SC	A-1, A-4	0-10	0-10	60-100	60-100	40-90	20-50	16-30	2-10
	39-45	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												
16E:												
Cowee	0-6	Loam	CL-ML, SM	A-4	0	0-10	80-100	80-100	65-90	45-65	14-25	1-7
	6-27	Clay loam, loam, sandy clay loam, gravelly fine sandy loam, gravelly sandy loam	CL, GC-GM	A-6, A-2	0-10	0-10	60-100	60-100	45-95	35-80	23-38	6-14
	27-39	Gravelly sandy loam, gravelly fine sandy loam, loam	SC-SM, GM, SC	A-1, A-4	0-10	0-10	60-100	60-100	40-90	20-50	16-30	2-10
	39-45	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												
17A:												
Craigsville	0-6	Cobbly sandy loam	SC-SM, SM	A-2, A-4, A-1	0	15-30	65-90	65-90	50-75	25-40	18-35	2-10
	6-32	Very cobbly sandy loam, very gravelly loam, extremely cobbly loam	GC-GM, GP-GM, SC	A-1, A-2	0	25-45	35-75	35-70	25-60	10-30	16-28	2-10
	32-62	Extremely cobbly loamy sand, very gravelly sandy loam, very cobbly sandy loam	SC-SM, GP-GC, GP-GM	A-1, A-2	0	25-45	35-75	35-70	25-60	5-20	16-24	2-6

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
18C:												
Cullasaja-------	0-6	Cobbly loam	OL, OH, GM	A-5, A-7, A-4	0-10	20-35	70-90	70-85	55-85	40-65	30-67	4-16
	6-21	Very cobbly loam, gravelly loam, extremely cobbly loam	GM, OH	A-5, A-7, A-1	0-10	20-50	35-90	30-85	25-85	20-65	30-67	4-16
	21-42	Very cobbly loam, very stony sandy loam, very cobbly sandy clay loam, extremely cobbly fine sandy loam	GC-GM, GM, CL	A-4, A-6, A-1	0-10	35-50	50-80	45-80	40-80	25-60	17-39	2-17
	42-62	Extremely cobbly sandy loam, very stony loamy sand, extremely cobbly loamy fine sand, very stony coarse sandy loam, very cobbly loam	GC-GM, GP-GM, SC	A-1, A-2	0-15	35-50	30-80	30-80	20-65	10-35	0-28	NP-10
18D:												
Cullasaja-------	0-6	Cobbly loam	OL, OH, GM	A-5, A-7, A-4	0-10	20-35	70-90	70-85	55-85	40-65	30-67	4-16
	6-21	Very cobbly loam, gravelly loam, extremely cobbly loam	GM, OH	A-5, A-7, A-1	0-10	20-50	35-90	30-85	25-85	20-65	30-67	4-16
	21-42	Very cobbly loam, very stony sandy loam, very cobbly sandy clay loam, extremely cobbly fine sandy loam	GC-GM, GM, CL	A-4, A-6, A-1	0-10	35-50	50-80	45-80	40-80	25-60	17-39	2-17
	42-62	Extremely cobbly sandy loam, very stony loamy sand, extremely cobbly loamy fine sand, very stony coarse sandy loam, very cobbly loam	GC-GM, GP-GM, SC	A-1, A-2	0-15	35-50	30-80	30-80	20-65	10-35	0-28	NP-10
19A:												
Delanco---------	0-10	Fine sandy loam	SC-SM, SM	A-2, A-4, A-6	0	0	70-100	70-100	60-95	25-50	20-37	2-12
	10-16	Fine sandy loam, gravelly loam	SC-SM, SM	A-2, A-4, A-6	0	0	65-100	60-100	55-95	25-50	16-30	2-12
	16-41	Sandy clay loam, gravelly clay loam	CL, SC	A-2, A-6, A-7	0	0	70-100	65-100	55-90	30-55	29-42	12-21
	41-47	Loam, silt loam, gravelly sandy loam	CL, GC	A-4, A-6	0	0	70-100	65-100	55-95	40-70	26-39	10-19
	47-62	Sandy loam, silt loam, gravelly loam	SM, SC, SC-SM	A-1, A-4, A-6	0	0	65-95	60-95	45-85	20-50	16-36	2-17

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
19B:												
Delanco---------	0-10	Fine sandy loam	SC-SM, SM	A-2, A-4, A-6	0	0	70-100	70-100	60-95	25-50	20-37	2-12
	10-16	Fine sandy loam, gravelly loam	SC-SM, SM	A-2, A-4, A-6	0	0	65-100	60-100	55-95	25-50	16-30	2-12
	16-41	Sandy clay loam, gravelly clay loam	CL, SC	A-2, A-6, A-7	0	0	70-100	65-100	55-90	30-55	29-42	12-21
	41-47	Loam, silt loam, gravelly sandy loam	CL, GC	A-4, A-6	0	0	70-100	65-100	55-95	40-70	26-39	10-19
	47-62	Sandy loam, silt loam, gravelly loam	SM, SC, SC-SM	A-1, A-4, A-6	0	0	65-95	60-95	45-85	20-50	16-36	2-17
20C:												
Delanco---------	0-10	Fine sandy loam	SC-SM, SM	A-2, A-4, A-6	0	0	70-100	70-100	60-95	25-50	20-37	2-12
	10-16	Fine sandy loam, gravelly loam	SC-SM, SM	A-2, A-4, A-6	0	0	65-100	60-100	55-95	25-50	16-30	2-12
	16-41	Sandy clay loam, gravelly clay loam	CL, SC	A-2, A-6, A-7	0	0	70-100	65-100	55-90	30-55	29-42	12-21
	41-47	Loam, silt loam, gravelly sandy loam	CL, GC	A-4, A-6	0	0	70-100	65-100	55-95	40-70	26-39	10-19
	47-62	Sandy loam, silt loam, gravelly loam	SM, SC, SC-SM	A-1, A-4, A-6	0	0	65-95	60-95	45-85	20-50	16-36	2-17
21B:												
Edneytown-------	0-4	Loam	ML, CL-ML	A-4	0	0	80-100	80-100	65-95	45-75	12-21	1-6
	4-7	Loam, fine sandy loam, sandy loam	ML, CL-ML, SM, SC-SM	A-4, A-2-4	0	0	80-100	80-100	45-95	25-75	12-21	1-6
	7-20	Sandy clay loam, clay loam	SC, CL	A-6, A-2-4	0	0	80-100	75-100	60-100	25-80	25-39	8-16
	20-27	Sandy loam, sandy clay loam	SC, SM, SC-SM	A-2-4, A-4	0	0	80-100	75-100	45-90	25-55	16-30	3-11
	27-62	Loamy sand, fine sandy loam, loam	SC-SM, SM	A-2-4, A-1, A-4	0	0	80-100	75-100	35-85	10-55	11-21	NP-6
21C:												
Edneytown-------	0-4	Loam	ML, CL-ML	A-4	0	0	80-100	80-100	65-95	45-75	12-21	1-6
	4-7	Loam, fine sandy loam, sandy loam	ML, CL-ML, SM, SC-SM	A-4, A-2-4	0	0	80-100	80-100	45-95	25-75	12-21	1-6
	7-20	Sandy clay loam, clay loam	SC, CL	A-6, A-2-4	0	0	80-100	75-100	60-100	25-80	25-39	8-16
	20-27	Sandy loam, sandy clay loam	SC, SM, SC-SM	A-2-4, A-4	0	0	80-100	75-100	45-90	25-55	16-30	3-11
	27-62	Loamy sand, fine sandy loam, loam	SC-SM, SM	A-2-4, A-1, A-4	0	0	80-100	75-100	35-85	10-55	11-21	NP-6

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
21D:												
Edneytown-------	0-4	Loam	ML, CL-ML	A-4	0	0	80-100	80-100	65-95	45-75	12-21	1-6
	4-7	Loam, fine sandy loam, sandy loam	ML, CL-ML, SM, SC-SM	A-4, A-2-4	0	0	80-100	80-100	45-95	25-75	12-21	1-6
	7-20	Sandy clay loam, clay loam	SC, CL	A-6, A-2-4	0	0	80-100	75-100	60-100	25-80	25-39	8-16
	20-27	Sandy loam, sandy clay loam	SC, SM, SC-SM	A-2-4, A-4	0	0	80-100	75-100	45-90	25-55	16-30	3-11
	27-62	Loamy sand, fine sandy loam, loam	SC-SM, SM	A-2-4, A-1, A-4	0	0	80-100	75-100	35-85	10-55	11-21	NP-6
21E:												
Edneytown-------	0-4	Loam	ML, CL-ML	A-4	0	0	80-100	80-100	65-95	45-75	12-21	1-6
	4-7	Loam, fine sandy loam, sandy loam	ML, CL-ML, SM, SC-SM	A-4, A-2-4	0	0	80-100	80-100	45-95	25-75	12-21	1-6
	7-20	Sandy clay loam, clay loam	SC, CL	A-6, A-2-4	0	0	80-100	75-100	60-100	25-80	25-39	8-16
	20-27	Sandy loam, sandy clay loam	SC, SM, SC-SM	A-2-4, A-4	0	0	80-100	75-100	45-90	25-55	16-30	3-11
	27-62	Loamy sand, fine sandy loam, loam	SC-SM, SM	A-2-4, A-1, A-4	0	0	80-100	75-100	35-85	10-55	11-21	NP-6
21F:												
Edneytown-------	0-4	Loam	ML, CL-ML	A-4	0	0	80-100	80-100	65-95	45-75	12-21	1-6
	4-7	Loam, fine sandy loam, sandy loam	ML, CL-ML, SM, SC-SM	A-4, A-2-4	0	0	80-100	80-100	45-95	25-75	12-21	1-6
	7-20	Sandy clay loam, clay loam	SC, CL	A-6, A-2-4	0	0	80-100	75-100	60-100	25-80	25-39	8-16
	20-27	Sandy loam, sandy clay loam	SC, SM, SC-SM	A-2-4, A-4	0	0	80-100	75-100	45-90	25-55	16-30	3-11
	27-62	Loamy sand, fine sandy loam, loam	SC-SM, SM	A-2-4, A-1, A-4	0	0	80-100	75-100	35-85	10-55	11-21	NP-6
22C:												
Edneytown-------	0-4	Loam	ML, CL-ML	A-4	0	0	80-100	80-100	65-95	45-75	12-21	1-6
	4-7	Loam, fine sandy loam, sandy loam	ML, CL-ML, SM, SC-SM	A-4, A-2-4	0	0	80-100	80-100	45-95	25-75	12-21	1-6
	7-20	Sandy clay loam, clay loam	SC, CL	A-6, A-2-4	0	0	80-100	75-100	60-100	25-80	25-39	8-16
	20-27	Sandy loam, sandy clay loam	SC, SM, SC-SM	A-2-4, A-4	0	0	80-100	75-100	45-90	25-55	16-30	3-11
	27-62	Loamy sand, fine sandy loam, loam	SC-SM, SM	A-2-4, A-1, A-4	0	0	80-100	75-100	35-85	10-55	11-21	NP-6
Urban land.												

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
23C:												
Edneyville------	0-5	Loam	ML, SM	A-4, A-7	0	0-10	80-100	80-100	65-95	45-70	20-43	3-13
	5-11	Loam, fine sandy loam, gravelly sandy loam	CL, CL-ML, GM	A-2, A-4, A-6	0-5	0-5	60-100	55-100	45-95	30-70	17-35	2-13
	11-34	Sandy loam, fine sandy loam, gravelly loam	GM, SC, SC-SM	A-1, A-4, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-31	2-12
	34-62	Sandy loam, fine sandy loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-29	2-12
23D:												
Edneyville------	0-5	Loam	ML, SM	A-4, A-7	0	0-10	80-100	80-100	65-95	45-70	20-43	3-13
	5-11	Loam, fine sandy loam, gravelly sandy loam	CL, CL-ML, GM	A-2, A-4, A-6	0-5	0-5	60-100	55-100	45-95	30-70	17-35	2-13
	11-34	Sandy loam, fine sandy loam, gravelly loam	GM, SC, SC-SM	A-1, A-4, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-31	2-12
	34-62	Sandy loam, fine sandy loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-29	2-12
23E:												
Edneyville------	0-5	Loam	ML, SM	A-4, A-7	0	0-10	80-100	80-100	65-95	45-70	20-43	3-13
	5-11	Loam, fine sandy loam, gravelly sandy loam	CL, CL-ML, GM	A-2, A-4, A-6	0-5	0-5	60-100	55-100	45-95	30-70	17-35	2-13
	11-34	Sandy loam, fine sandy loam, gravelly loam	GM, SC, SC-SM	A-1, A-4, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-31	2-12
	34-62	Sandy loam, fine sandy loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-29	2-12
24D:												
Edneyville------	0-5	Loam	ML, SM	A-4, A-7	0	0-10	80-100	80-100	65-95	45-70	20-43	3-13
	5-11	Loam, fine sandy loam, gravelly sandy loam	CL, CL-ML, GM	A-2, A-4, A-6	0-5	0-5	60-100	55-100	45-95	30-70	17-35	2-13
	11-34	Sandy loam, fine sandy loam, gravelly loam	GM, SC, SC-SM	A-1, A-4, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-31	2-12
	34-62	Sandy loam, fine sandy loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-29	2-12

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plas-ticity index
	In				Pct	Pct					Pct	
24E:												
Edneyville------	0-5	Loam	ML, SM	A-4, A-7	0	0-10	80-100	80-100	65-95	45-70	20-43	3-13
	5-11	Loam, fine sandy loam, gravelly sandy loam	CL, CL-ML, GM	A-2, A-4, A-6	0-5	0-5	60-100	55-100	45-95	30-70	17-35	2-13
	11-34	Sandy loam, fine sandy loam, gravelly loam	GM, SC, SC-SM	A-1, A-4, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-31	2-12
	34-62	Sandy loam, fine sandy loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-29	2-12
24F:												
Edneyville------	0-5	Loam	ML, SM	A-4, A-7	0	0-10	80-100	80-100	65-95	45-70	20-43	3-13
	5-11	Loam, fine sandy loam, gravelly sandy loam	CL, CL-ML, GM	A-2, A-4, A-6	0-5	0-5	60-100	55-100	45-95	30-70	17-35	2-13
	11-34	Sandy loam, fine sandy loam, gravelly loam	GM, SC, SC-SM	A-1, A-4, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-31	2-12
	34-62	Sandy loam, fine sandy loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-5	0-5	60-100	55-100	40-85	20-50	16-29	2-12
25B:												
Elsinboro-------	0-10	Fine sandy loam	SC, SC-SM	A-2, A-4, A-6	0	0-10	80-100	80-100	70-95	25-45	21-35	4-12
	10-18	Fine sandy loam, loam, silt loam, gravelly sandy loam	SC, SC-SM	A-2, A-4, A-6	0	0-15	70-100	70-100	60-95	25-45	19-30	4-12
	18-45	Clay loam, sandy clay loam, silty clay loam, gravelly silt loam, cobbly loam	CL, GC	A-6, A-7	0	0-15	70-100	70-100	55-95	45-75	27-43	12-24
	45-62	Cobbly sandy loam, fine sandy loam, sandy clay loam, gravelly silt loam, cobbly loam	CL, SC, SC-SM	A-2, A-7	0	0-23	80-100	80-100	55-95	25-60	18-43	4-24
26B:												
Elsinboro-------	0-10	Fine sandy loam	SC, SC-SM	A-2, A-4, A-6	0	0-10	80-100	80-100	70-95	25-45	21-35	4-12
	10-18	Fine sandy loam, loam, silt loam, gravelly sandy loam	SC, SC-SM	A-2, A-4, A-6	0	0-15	70-100	70-100	60-95	25-45	19-30	4-12
	18-45	Clay loam, sandy clay loam, silty clay loam, gravelly silt loam, cobbly loam	CL, GC	A-6, A-7	0	0-15	70-100	70-100	55-95	45-75	27-43	12-24
	45-62	Cobbly sandy loam, fine sandy loam, sandy clay loam, gravelly silt loam, cobbly loam	CL, SC, SC-SM	A-2, A-7	0	0-23	80-100	80-100	55-95	25-60	18-43	4-24

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
26B:												
Urban land.												
27D:												
Evard-----------	0-8	Gravelly fine sandy loam, gravelly sandy loam, gravelly loam, fine sandy loam	SC-SM, SM, SC	A-2-4, A-1, A-4, A-2	0	0-15	75-85	60-80	50-75	15-40	16-30	2-10
	8-35	Clay loam, sandy clay loam, loam	SC-SM, CL, SC, CL-ML	A-6, A-2-4, A-2-6, A-4	0	0-15	80-100	75-100	60-95	25-75	23-38	6-14
	35-79	Channery fine sandy loam, gravelly loamy fine sand, loamy sand, sandy loam, fine sandy loam, loam	SC, SM, ML, SC-SM, CL-ML, CL	A-2-4, A-1, A-4, A-2	0	0-15	80-100	65-100	50-90	10-55	12-27	NP-8
Cowee-----------	0-6	Gravelly loam	GC-GM, GM, CL-ML	A-2, A-4	0-10	0-10	60-100	55-100	45-90	30-65	14-25	1-7
	6-27	Gravelly clay loam, loam, sandy clay loam, gravelly fine sandy loam, gravelly sandy loam	GC, GC-GM, CL	A-6, A-2	0-10	0-10	60-100	55-100	45-95	35-80	23-38	6-14
	27-39	Gravelly sandy loam, gravelly fine sandy loam, loam	SC-SM, GM, SC	A-1, A-4	0-10	0-10	60-100	60-100	40-90	20-50	16-30	2-10
	39-45	Bedrock			---	---	---	---	---	---	---	---
28B:												
Glenelg---------	0-4	Loam	CL, GC	A-4, A-6, A-7	0	0	70-100	70-100	60-95	40-70	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13
28C:												
Glenelg---------	0-4	Loam	CL, GC	A-4, A-6, A-7	0	0	70-100	70-100	60-95	40-70	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
28D:												
Glenelg---------	0-4	Loam	CL, GC	A-4, A-6, A-7	0	0	70-100	70-100	60-95	40-70	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13
28E:												
Glenelg---------	0-4	Loam	CL, GC	A-4, A-6, A-7	0	0	70-100	70-100	60-95	40-70	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13
28F:												
Glenelg---------	0-4	Loam	CL, GC	A-4, A-6, A-7	0	0	70-100	70-100	60-95	40-70	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13
29C:												
Glenelg---------	0-4	Gravelly loam	GC	A-2, A-6, A-7	0	0	45-75	45-75	35-70	25-50	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13
29D:												
Glenelg---------	0-4	Gravelly loam	GC	A-2, A-6, A-7	0	0	45-75	45-75	35-70	25-50	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
29E:												
Glenelg---------	0-4	Gravelly loam	GC	A-2, A-6, A-7	0	0	45-75	45-75	35-70	25-50	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13
30C:												
Glenelg---------	0-4	Loam	CL, GC	A-4, A-6, A-7	0	0	70-100	70-100	60-95	40-70	27-41	9-17
	4-24	Clay loam, silt loam, silty clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	45-95	30-75	29-42	13-22
	24-62	Fine sandy loam, silt loam, gravelly loam, gravelly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0	0-25	60-90	60-90	50-90	20-45	16-32	2-13
Urban land.												
31D:												
Greenlee--------	0-7	Very cobbly loam	SM, SC, SC-SM, ML, CL, CL-ML	A-4	0	37-48	65-75	55-75	45-75	30-60	15-30	2-11
	7-53	Very cobbly sandy loam, very cobbly loam, very cobbly sandy clay loam	SM, SC, SC-SM, ML, CL, CL-ML	A-1, A-2-4, A-4	0	36-51	65-85	55-80	35-75	20-60	10-30	NP-11
	53-62	Extremely cobbly sandy loam, very cobbly loam, extremely cobbly sand	SM, SC-SM, SP, SP-SM, ML, CL-ML	A-1, A-2-4, A-4	0	36-65	55-85	40-80	20-75	2-60	8-23	NP-7
31E:												
Greenlee--------	0-7	Very cobbly loam	SM, SC, SC-SM, ML, CL, CL-ML	A-4	0	37-48	65-75	55-75	45-75	30-60	15-30	2-11
	7-53	Very cobbly sandy loam, very cobbly loam, very cobbly sandy clay loam	SM, SC, SC-SM, ML, CL, CL-ML	A-1, A-2-4, A-4	0	36-51	65-85	55-80	35-75	20-60	10-30	NP-11
	53-62	Extremely cobbly sandy loam, very cobbly loam, extremely cobbly sand	SM, SC-SM, SP, SP-SM, ML, CL-ML	A-1, A-2-4, A-4	0	36-65	55-85	40-80	20-75	2-60	8-23	NP-7

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
32A:												
Hatboro---------	0-8	Sandy loam	SM	A-2, A-4, A-7	0	0	80-100	80-100	55-85	25-45	22-42	3-12
	8-45	Sandy clay loam, clay loam, silt loam, silty clay loam	CL, SC	A-2, A-6, A-7	0	0	80-100	80-100	60-95	30-60	24-44	9-25
	45-62	Silt loam, silty clay loam, gravelly clay loam, extremely gravelly sandy clay loam	CH, CL, GP-GM	A-1, A-6, A-7	0	0	15-100	10-100	10-100	5-100	16-53	2-32
33B:												
Hayesville------	0-6	Loam	SM, ML	A-4	0	0-8	80-100	80-100	65-95	45-70	11-20	NP-2
	6-11	Loam, gravelly fine sandy loam	ML, GM	A-4, A-2	0	0-23	60-100	60-100	45-95	30-70	9-20	NP-2
	11-43	Clay loam, clay	ML	A-4, A-7	0	0-9	80-100	80-100	65-100	55-85	31-42	7-12
	43-49	Clay loam, sandy clay loam, loam	ML	A-4	0	0-9	80-100	80-100	65-100	50-85	20-34	2-8
	49-62	Sandy loam, loam, sandy clay loam, fine sandy loam	SM, CL-ML	A-4, A-2	0	0-8	80-100	80-100	60-90	30-55	13-24	NP-4
33C:												
Hayesville------	0-6	Loam	SM, ML	A-4	0	0-8	80-100	80-100	65-95	45-70	11-20	NP-2
	6-11	Loam, gravelly fine sandy loam	ML, GM	A-4, A-2	0	0-23	60-100	60-100	45-95	30-70	9-20	NP-2
	11-43	Clay loam, clay	ML	A-4, A-7	0	0-9	80-100	80-100	65-100	55-85	31-42	7-12
	43-49	Clay loam, sandy clay loam, loam	ML	A-4	0	0-9	80-100	80-100	65-100	50-85	20-34	2-8
	49-62	Sandy loam, loam, sandy clay loam, fine sandy loam	SM, CL-ML	A-4, A-2	0	0-8	80-100	80-100	60-90	30-55	13-24	NP-4
33D:												
Hayesville------	0-6	Loam	SM, ML	A-4	0	0-8	80-100	80-100	65-95	45-70	11-20	NP-2
	6-11	Loam, gravelly fine sandy loam	ML, GM	A-4, A-2	0	0-23	60-100	60-100	45-95	30-70	9-20	NP-2
	11-43	Clay loam, clay	ML	A-4, A-7	0	0-9	80-100	80-100	65-100	55-85	31-42	7-12
	43-49	Clay loam, sandy clay loam, loam	ML	A-4	0	0-9	80-100	80-100	65-100	50-85	20-34	2-8
	49-62	Sandy loam, loam, sandy clay loam, fine sandy loam	SM, CL-ML	A-4, A-2	0	0-8	80-100	80-100	60-90	30-55	13-24	NP-4

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
34B:												
Keener----------	0-5	Loam	CL, CL-ML, SM	A-4	0	0-5	80-100	80-100	65-95	45-75	13-30	NP-10
	5-14	Loam, fine sandy loam, gravelly loam	CL, CL-ML, GM	A-2, A-4	0	0-10	65-100	60-100	45-95	30-70	12-30	NP-10
	14-54	Clay loam, sandy clay loam, gravelly clay loam, cobbly loam	CL, GC-GM	A-4, A-6	0	0-15	65-100	65-100	50-95	40-80	23-38	6-14
	54-62	Gravelly sandy clay loam, clay loam, gravelly loam, very cobbly loam	GM, SC	A-1, A-4, A-6	0	0-25	50-85	45-85	35-80	15-50	16-38	2-14
34C:												
Keener----------	0-5	Loam	CL, CL-ML, SM	A-4	0	0-5	80-100	80-100	65-95	45-75	13-30	NP-10
	5-14	Loam, fine sandy loam, gravelly loam	CL, CL-ML, GM	A-2, A-4	0	0-10	65-100	60-100	45-95	30-70	12-30	NP-10
	14-54	Clay loam, sandy clay loam, gravelly clay loam, cobbly loam	CL, GC-GM	A-4, A-6	0	0-15	65-100	65-100	50-95	40-80	23-38	6-14
	54-62	Gravelly sandy clay loam, clay loam, gravelly loam, very cobbly loam	GM, SC	A-1, A-4, A-6	0	0-25	50-85	45-85	35-80	15-50	16-38	2-14
34D:												
Keener----------	0-5	Loam	CL, CL-ML, SM	A-4	0	0-5	80-100	80-100	65-95	45-75	13-30	NP-10
	5-14	Loam, fine sandy loam, gravelly loam	CL, CL-ML, GM	A-2, A-4	0	0-10	65-100	60-100	45-95	30-70	12-30	NP-10
	14-54	Clay loam, sandy clay loam, gravelly clay loam, cobbly loam	CL, GC-GM	A-4, A-6	0	0-15	65-100	65-100	50-95	40-80	23-38	6-14
	54-62	Gravelly sandy clay loam, clay loam, gravelly loam, very cobbly loam	GM, SC	A-1, A-4, A-6	0	0-25	50-85	45-85	35-80	15-50	16-38	2-14
35C:												
Keener----------	0-5	Loam	CL, CL-ML, SM	A-4	0	0-5	80-100	80-100	65-95	45-75	13-30	NP-10
	5-14	Loam, fine sandy loam, gravelly loam	CL, CL-ML, GM	A-2, A-4	0	0-10	65-100	60-100	45-95	30-70	12-30	NP-10
	14-54	Clay loam, sandy clay loam, gravelly clay loam, cobbly loam	CL, GC-GM	A-4, A-6	0	0-15	65-100	65-100	50-95	40-80	23-38	6-14
	54-62	Gravelly sandy clay loam, clay loam, gravelly loam, very cobbly loam	GM, SC	A-1, A-4, A-6	0	0-25	50-85	45-85	35-80	15-50	16-38	2-14

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
35D:												
Keener----------	0-5	Loam	CL, CL-ML, SM	A-4	0	0-5	80-100	80-100	65-95	45-75	13-30	NP-10
	5-14	Loam, fine sandy loam, gravelly loam	CL, CL-ML, GM	A-2, A-4	0	0-10	65-100	60-100	45-95	30-70	12-30	NP-10
	14-54	Clay loam, sandy clay loam, gravelly clay loam, cobbly loam	CL, GC-GM	A-4, A-6	0	0-15	65-100	65-100	50-95	40-80	23-38	6-14
	54-62	Gravelly sandy clay loam, clay loam, gravelly loam, very cobbly loam	GM, SC	A-1, A-4, A-6	0	0-25	50-85	45-85	35-80	15-50	16-38	2-14
36A:												
Kinkora---------	0-7	Fine sandy loam	SC, SC-SM, SM	A-2, A-6, A-7	0	0	75-100	75-100	65-95	25-45	22-41	6-13
	7-16	Fine sandy loam, silt loam	SC, SC-SM	A-2, A-6	0	0	75-100	75-100	65-95	25-45	21-37	6-13
	16-38	Clay loam, silty clay loam, silty clay, clay	CH, CL	A-7	0	0	75-100	75-100	65-100	50-90	45-65	25-40
	38-48	Gravelly loam, silt loam, very gravelly loam	CL, GC	A-2, A-6	0	0	35-100	35-100	25-95	20-75	24-38	9-19
	48-62	Gravelly loamy sand, sandy loam, very gravelly loamy sand	GP-GC, SC	A-1, A-2	0	0-10	40-100	35-100	30-90	5-30	20-32	6-13
37C:												
Konnarock-------	0-4	Channery silt loam	CL, GC-GM	A-4, A-6	0	10-20	60-85	55-80	50-80	40-70	21-39	6-17
	4-19	Very channery silt loam, channery silt loam, extremely channery loam	CL, GC, GP-GC	A-2, A-6	0	10-30	20-85	15-85	15-80	10-70	26-37	9-17
	19-23	Extremely channery silt loam, very channery loam, very channery silt loam, channers	GC, GW-GC	A-2, A-6	0	15-35	10-60	5-60	5-60	5-50	24-36	9-17
	23-33	Bedrock			---	---	---	---	---	---	---	---
37D:												
Konnarock-------	0-4	Channery silt loam	CL, GC-GM	A-4, A-6	0	10-20	60-85	55-80	50-80	40-70	21-39	6-17
	4-19	Very channery silt loam, channery silt loam, extremely channery loam	CL, GC, GP-GC	A-2, A-6	0	10-30	20-85	15-85	15-80	10-70	26-37	9-17
	19-23	Extremely channery silt loam, very channery loam, very channery silt loam, channers	GC, GW-GC	A-2, A-6	0	15-35	10-60	5-60	5-60	5-50	24-36	9-17
	23-33	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
37E:												
Konnarock-------	0-4	Channery silt loam	CL, GC-GM	A-4, A-6	0	10-20	60-85	55-80	50-80	40-70	21-39	6-17
	4-19	Very channery silt loam, channery silt loam, extremely channery loam	CL, GC, GP-GC	A-2, A-6	0	10-30	20-85	15-85	15-80	10-70	26-37	9-17
	19-23	Extremely channery silt loam, very channery loam, very channery silt loam, channers	GC, GW-GC	A-2, A-6	0	15-35	10-60	5-60	5-60	5-50	24-36	9-17
	23-33	Bedrock			---	---	---	---	---	---	---	---
38C:												
McCamy----------	0-5	Fine sandy loam	SM, SC-SM	A-2, A-4	0	0-5	80-100	80-100	65-95	25-45	13-25	NP-7
	5-9	Fine sandy loam, loam, gravelly sandy loam	SC, SM, SC-SM	A-1, A-4	0	0-5	60-100	55-100	45-100	15-50	13-31	NP-10
	9-23	Sandy clay loam, clay loam, gravelly loam	CL, GC-GM, SC	A-1, A-4, A-6	0	0-5	60-100	55-100	45-95	25-60	25-38	6-14
	23-26	Gravelly sandy loam, sandy clay loam, clay loam, very gravelly loamy sand, loam, clay	GP-GM, ML, SC-SM	A-1, A-2, A-7	0	0-10	40-90	35-90	25-90	10-65	12-48	NP-20
	26-31	Bedrock			---	---	---	---	---	---	---	---
	31-41	Bedrock			---	---	---	---	---	---	---	---
38D:												
McCamy----------	0-5	Fine sandy loam	SM, SC-SM	A-2, A-4	0	0-5	80-100	80-100	65-95	25-45	13-25	NP-7
	5-9	Fine sandy loam, loam, gravelly sandy loam	SC, SM, SC-SM	A-1, A-4	0	0-5	60-100	55-100	45-100	15-50	13-31	NP-10
	9-23	Sandy clay loam, clay loam, gravelly loam	CL, GC-GM, SC	A-1, A-4, A-6	0	0-5	60-100	55-100	45-95	25-60	25-38	6-14
	23-26	Gravelly sandy loam, sandy clay loam, clay loam, very gravelly loamy sand, loam, clay	SC-SM, ML, GP-GM	A-1, A-2, A-7	0	0-10	40-90	35-90	25-90	10-65	12-48	NP-20
	26-31	Bedrock			---	---	---	---	---	---	---	---
	31-41	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
39D:												
McCamy----------	0-5	Fine sandy loam	SM, SC-SM	A-2, A-4	0	0-5	80-100	80-100	65-95	25-45	13-25	NP-7
	5-9	Fine sandy loam, loam, gravelly sandy loam	SC, SM, SC-SM	A-1, A-4	0	0-5	60-100	55-100	45-100	15-50	13-31	NP-10
	9-23	Sandy clay loam, clay loam, gravelly loam	CL, GC-GM, SC	A-1, A-4, A-6	0	0-5	60-100	55-100	45-95	25-60	25-38	6-14
	23-26	Gravelly sandy loam, sandy clay loam, clay loam, very gravelly loamy sand, loam, clay	GP-GM, ML, SC-SM	A-1, A-2, A-7	0	0-10	40-90	35-90	25-90	10-65	12-48	NP-20
	26-31	Bedrock			---	---	---	---	---	---	---	---
	31-41	Bedrock			---	---	---	---	---	---	---	---
39E:												
McCamy----------	0-5	Fine sandy loam	SM, SC-SM	A-2, A-4	0	0-5	80-100	80-100	65-95	25-45	13-25	NP-7
	5-9	Fine sandy loam, loam, gravelly sandy loam	SC, SM, SC-SM	A-1, A-4	0	0-5	60-100	55-100	45-100	15-50	13-31	NP-10
	9-23	Sandy clay loam, clay loam, gravelly loam	CL, GC-GM, SC	A-1, A-4, A-6	0	0-5	60-100	55-100	45-95	25-60	25-38	6-14
	23-26	Gravelly sandy loam, sandy clay loam, clay loam, very gravelly loamy sand, loam, clay	GP-GM, ML, SC-SM	A-1, A-2, A-7	0	0-10	40-90	35-90	25-90	10-65	12-48	NP-20
	26-31	Bedrock			---	---	---	---	---	---	---	---
	31-41	Bedrock			---	---	---	---	---	---	---	---
40D:												
Mt Rogers-------	0-16	Gravelly loam	GM	A-1, A-2, A-7	0	0-20	45-65	40-65	35-60	20-45	35-77	3-16
	16-33	Very cobbly loam, very gravelly silt loam, extremely cobbly sandy loam, very stony fine sandy loam	GC, GC-GM, GP-GM	A-1, A-2, A-4	0-20	20-40	15-65	10-60	10-60	5-45	12-30	NP-10
	33-62	Extremely cobbly coarse sandy loam, very cobbly silt loam, extremely cobbly loam, very stony fine sandy loam	GC, GC-GM, GP-GM	A-1, A-2	0-20	35-50	20-60	15-60	10-45	5-30	12-30	NP-10

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
40D:												
Bloodyhorse-----	0-12	Gravelly loam	GM	A-1, A-2, A-7	0	0-10	40-55	35-55	30-55	20-40	35-77	3-16
	12-28	Very gravelly loam, extremely gravelly sandy loam, very stony silt loam, very cobbly fine sandy loam	GC, GC-GM, GP	A-1, A-2	0-15	0-15	15-50	10-50	5-50	4-35	12-30	NP-10
	28-37	Extremely gravelly loam, very gravelly sandy loam, very stony silt loam, very cobbly fine sandy loam	GC, GC-GM, GP	A-1, A-2	0-15	0-15	15-40	10-35	5-35	4-25	12-30	NP-10
	37-47	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												
40F:												
Mt Rogers-------	0-16	Gravelly loam	GM	A-1, A-2, A-7	0	0-20	45-65	40-65	35-60	20-45	35-77	3-16
	16-33	Very cobbly loam, very gravelly silt loam, extremely cobbly sandy loam, very stony fine sandy loam	GC, GC-GM, GP-GM	A-1, A-2, A-4	0-20	20-40	15-65	10-60	10-60	5-45	12-30	NP-10
	33-62	Extremely cobbly coarse sandy loam, very cobbly silt loam, extremely cobbly loam, very stony fine sandy loam	GC, GC-GM, GP-GM	A-1, A-2	0-20	35-50	20-60	15-60	10-45	5-30	12-30	NP-10
Bloodyhorse-----	0-12	Gravelly loam	GM	A-1, A-2, A-7	0	0-10	40-55	35-55	30-55	20-40	35-77	3-16
	12-28	Very gravelly loam, extremely gravelly sandy loam, very stony silt loam, very cobbly fine sandy loam	GC, GC-GM, GP	A-1, A-2	0-15	0-15	15-50	10-50	5-50	4-35	12-30	NP-10
	28-37	Extremely gravelly loam, very gravelly sandy loam, very stony silt loam, very cobbly fine sandy loam	GC, GC-GM, GP	A-1, A-2	0-15	0-15	15-40	10-35	5-35	4-25	12-30	NP-10
	37-47	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
41C:												
Mt Rogers-------	0-16	Gravelly loam	GM	A-1, A-2, A-7	0	0-20	45-65	40-65	35-60	20-45	35-77	3-16
	16-33	Very cobbly loam, very gravelly silt loam, extremely cobbly sandy loam, very stony fine sandy loam	GC, GC-GM, GP-GM	A-1, A-2, A-4	0-20	20-40	15-65	10-60	10-60	5-45	12-30	NP-10
	33-62	Extremely cobbly coarse sandy loam, very cobbly silt loam, extremely cobbly loam, very stony fine sandy loam	GC, GC-GM, GP-GM	A-1, A-2	0-20	35-50	20-60	15-60	10-45	5-30	12-30	NP-10
Buzzrock--------	0-14	Loam, gravelly loam	SM, GM	A-1, A-5, A-7	0-10	0-20	50-75	45-75	35-70	25-50	35-77	3-16
	14-20	Very channery loam, extremely channery sandy loam, very channery silt loam, extremely channery fine sandy loam	GC, GC-GM, GM	A-1, A-2, A-4	0-10	15-35	35-60	30-60	25-55	20-45	12-30	NP-10
	20-42	Channery, channers, cobbles, extremely channery sandy loam, extremely channery fine sandy loam, extremely channery loam, extremely channery silt loam	GP-GC, GW	A-1, A-2	0-10	50-60	10-15	0-15	0-15	0-10	12-30	NP-10
	42-52	Bedrock			---	---	---	---	---	---	---	---
41D:												
Mt Rogers-------	0-16	Gravelly loam	GM	A-1, A-2, A-7	0	0-20	45-65	40-65	35-60	20-45	35-77	3-16
	16-33	Very cobbly loam, very gravelly silt loam, extremely cobbly sandy loam, very stony fine sandy loam	GC, GC-GM, GP-GM	A-1, A-2, A-4	0-20	20-40	15-65	10-60	10-60	5-45	12-30	NP-10
	33-62	Extremely cobbly coarse sandy loam, very cobbly silt loam, extremely cobbly loam, very stony fine sandy loam	GC, GC-GM, GP-GM	A-1, A-2	0-20	35-50	20-60	15-60	10-45	5-30	12-30	NP-10

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
41D:												
Buzzrock--------	0-14	Loam, gravelly loam	SM, GM	A-1, A-5, A-7	0-10	0-20	50-75	45-75	35-70	25-50	35-77	3-16
	14-20	Very channery loam, extremely channery sandy loam, very channery silt loam, extremely channery fine sandy loam	GC, GC-GM, GM	A-1, A-2, A-4	0-10	15-35	35-60	30-60	25-55	20-45	12-30	NP-10
	20-42	Channery, channers, cobbles, extremely channery sandy loam, extremely channery fine sandy loam, extremely channery loam, extremely channery silt loam	GP-GC, GW	A-1, A-2	0-10	50-60	10-15	0-15	0-15	0-10	12-30	NP-10
	42-52	Bedrock			---	---	---	---	---	---	---	---
42C:												
Peaks-----------	0-4	Very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-50	25-50	20-45	15-30	20-36	3-10
	4-8	Very gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-4	0	0	30-75	25-75	20-70	15-50	15-28	1-10
	8-23	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0	25-50	25-50	20-45	15-35	16-30	2-12
	23-32	Extremely gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, extremely gravelly loamy sand	GC, GP-GC, GP-GM	A-1, A-2	0	0	15-50	10-50	10-40	5-20	16-30	2-12
	32-42	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
42D:												
Peaks-----------	0-4	Very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-50	25-50	20-45	15-30	20-36	3-10
	4-8	Very gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-4	0	0	30-75	25-75	20-70	15-50	15-28	1-10
	8-23	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0	25-50	25-50	20-45	15-35	16-30	2-12
	23-32	Extremely gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, extremely gravelly loamy sand	GC, GP-GC, GP-GM	A-1, A-2	0	0	15-50	10-50	10-40	5-20	16-30	2-12
	32-42	Bedrock			---	---	---	---	---	---	---	---
42E:												
Peaks-----------	0-4	Very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-50	25-50	20-45	15-30	20-36	3-10
	4-8	Very gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-4	0	0	30-75	25-75	20-70	15-50	15-28	1-10
	8-23	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0	25-50	25-50	20-45	15-35	16-30	2-12
	23-32	Extremely gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, extremely gravelly loamy sand	GC, GP-GC, GP-GM	A-1, A-2	0	0	15-50	10-50	10-40	5-20	16-30	2-12
	32-42	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
43C:												
Peaks-----------	0-4	Very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-50	25-50	20-45	15-30	20-36	3-10
	4-8	Very gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-4	0	0	30-75	25-75	20-70	15-50	15-28	1-10
	8-23	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0	25-50	25-50	20-45	15-35	16-30	2-12
	23-32	Extremely gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, extremely gravelly loamy sand	GC, GP-GC, GP-GM	A-1, A-2	0	0	15-50	10-50	10-40	5-20	16-30	2-12
	32-42	Bedrock			---	---	---	---	---	---	---	---
43D:												
Peaks-----------	0-4	Very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-50	25-50	20-45	15-30	20-36	3-10
	4-8	Very gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-4	0	0	30-75	25-75	20-70	15-50	15-28	1-10
	8-23	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0	25-50	25-50	20-45	15-35	16-30	2-12
	23-32	Extremely gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, extremely gravelly loamy sand	GC, GP-GC, GP-GM	A-1, A-2	0	0	15-50	10-50	10-40	5-20	16-30	2-12
	32-42	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
43E:												
Peaks-----------	0-4	Very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-50	25-50	20-45	15-30	20-36	3-10
	4-8	Very gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-4	0	0	30-75	25-75	20-70	15-50	15-28	1-10
	8-23	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0	25-50	25-50	20-45	15-35	16-30	2-12
	23-32	Extremely gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, extremely gravelly loamy sand	GC, GP-GC, GP-GM	A-1, A-2	0	0	15-50	10-50	10-40	5-20	16-30	2-12
	32-42	Bedrock			---	---	---	---	---	---	---	---
43F:												
Peaks-----------	0-4	Very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-50	25-50	20-45	15-30	20-36	3-10
	4-8	Very gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-4	0	0	30-75	25-75	20-70	15-50	15-28	1-10
	8-23	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0	25-50	25-50	20-45	15-35	16-30	2-12
	23-32	Extremely gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, extremely gravelly loamy sand	GC, GP-GC, GP-GM	A-1, A-2	0	0	15-50	10-50	10-40	5-20	16-30	2-12
	32-42	Bedrock			---	---	---	---	---	---	---	---
44C:												
Pigeonroost-----	0-5	Loam	CL, ML, SC-SM	A-4, A-7	0	0-5	80-100	80-100	65-95	45-70	21-41	4-13
	5-24	Clay loam, sandy clay loam, silty clay loam, loam	CL, SC	A-6, A-7	0	0-5	80-100	80-100	60-95	45-75	27-44	12-25
	24-37	Sandy loam, loam, fine sandy loam, sandy clay loam	CL, SC-SM	A-2, A-4, A-6	0	0-5	80-100	80-100	60-95	30-55	18-36	4-17
	37-72	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas-ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
44D:												
Pigeonroost-----	0-5	Loam	CL, ML, SC-SM	A-4, A-7	0	0-5	80-100	80-100	65-95	45-70	21-41	4-13
	5-24	Clay loam, sandy clay loam, silty clay loam, loam	CL, SC	A-6, A-7	0	0-5	80-100	80-100	60-95	45-75	27-44	12-25
	24-37	Sandy loam, loam, fine sandy loam, sandy clay loam	CL, SC-SM	A-2, A-4, A-6	0	0-5	80-100	80-100	60-95	30-55	18-36	4-17
	37-72	Bedrock			---	---	---	---	---	---	---	---
44E:												
Pigeonroost-----	0-5	Loam	CL, ML, SC-SM	A-4, A-7	0	0-5	80-100	80-100	65-95	45-70	21-41	4-13
	5-24	Clay loam, sandy clay loam, silty clay loam, loam	CL, SC	A-6, A-7	0	0-5	80-100	80-100	60-95	45-75	27-44	12-25
	24-37	Sandy loam, loam, fine sandy loam, sandy clay loam	CL, SC-SM	A-2, A-4, A-6	0	0-5	80-100	80-100	60-95	30-55	18-36	4-17
	37-72	Bedrock			---	---	---	---	---	---	---	---
45D:												
Pigeonroost-----	0-5	Gravelly loam	GC, GC-GM, GM	A-2, A-4, A-7	0	0-10	55-75	55-75	45-70	30-50	21-41	4-13
	5-24	Clay loam, sandy clay loam, silty clay loam, loam	CL, SC	A-6, A-7	0	0-5	80-100	80-100	60-95	45-75	27-44	12-25
	24-37	Sandy loam, loam, fine sandy loam, sandy clay loam	CL, SC-SM	A-2, A-4, A-6	0	0-5	80-100	80-100	60-95	30-55	18-36	4-17
	37-72	Bedrock			---	---	---	---	---	---	---	---
45E:												
Pigeonroost-----	0-5	Gravelly loam	GC, GC-GM, GM	A-2, A-4, A-7	0	0-10	55-75	55-75	45-70	30-50	21-41	4-13
	5-24	Clay loam, sandy clay loam, silty clay loam, loam	CL, SC	A-6, A-7	0	0-5	80-100	80-100	60-95	45-75	27-44	12-25
	24-37	Sandy loam, loam, fine sandy loam, sandy clay loam	CL, SC-SM	A-2, A-4, A-6	0	0-5	80-100	80-100	60-95	30-55	18-36	4-17
	37-72	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
46E:												
Pigeonroost-----	0-5	Loam	CL, ML, SC-SM	A-4, A-7	0	0-5	80-100	80-100	65-95	45-70	21-41	4-13
	5-24	Clay loam, sandy clay loam, silty clay loam, loam	CL, SC	A-6, A-7	0	0-5	80-100	80-100	60-95	45-75	27-44	12-25
	24-37	Sandy loam, loam, fine sandy loam, sandy clay loam	CL, SC-SM	A-2, A-4, A-6	0	0-5	80-100	80-100	60-95	30-55	18-36	4-17
	37-72	Bedrock			---	---	---	---	---	---	---	---
Rock outcrop.												
47D:												
Pineola---------	0-10	Loam	ML, SC-SM	A-4, A-7	0	0	75-100	75-100	60-95	40-70	25-48	4-13
	10-15	Loam, silt loam, gravelly sandy loam, gravelly fine sandy loam	CL, GC-GM	A-2, A-4, A-6	0	0-5	55-100	50-100	40-95	30-70	20-33	4-13
	15-26	Gravelly clay loam, gravelly sandy clay loam, loam, silty clay loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	40-95	30-80	27-44	12-25
	26-29	Gravelly sandy loam, gravelly silt loam, loam, very gravelly fine sandy loam	GM, SC, SC-SM	A-1, A-6	0	0-10	40-100	40-100	30-85	15-50	16-30	2-12
	29-72	Bedrock			---	---	---	---	---	---	---	---
48E:												
Pineola---------	0-10	Loam	ML, SC-SM	A-4, A-7	0	0	75-100	75-100	60-95	40-70	25-48	4-13
	10-15	Loam, silt loam, gravelly sandy loam, gravelly fine sandy loam	CL, GC-GM	A-2, A-4, A-6	0	0-5	55-100	50-100	40-95	30-70	20-33	4-13
	15-26	Gravelly clay loam, gravelly sandy clay loam, loam, silty clay loam	CL, GC	A-2, A-6, A-7	0	0-5	55-100	50-100	40-95	30-80	27-44	12-25
	26-29	Gravelly sandy loam, gravelly silt loam, loam, very gravelly fine sandy loam	GM, SC, SC-SM	A-1, A-6	0	0-10	40-100	40-100	30-85	15-50	16-30	2-12
	29-72	Bedrock			---	---	---	---	---	---	---	---
49.												
Pits, quarries												

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
50F:												
Rock outcrop.												
Peaks-----------	0-4	Very gravelly loam	GC-GM, GM	A-1, A-2	0	0	30-50	25-50	20-45	15-30	20-36	3-10
	4-8	Very gravelly loam, gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-4	0	0	30-75	25-75	20-70	15-50	15-28	1-10
	8-23	Very gravelly loam, very gravelly fine sandy loam, very gravelly sandy loam	GC, GC-GM, GM	A-1, A-2	0	0	25-50	25-50	20-45	15-35	16-30	2-12
	23-32	Extremely gravelly sandy loam, very gravelly loam, very gravelly fine sandy loam, extremely gravelly loamy sand	GC, GP-GC, GP-GM	A-1, A-2	0	0	15-50	10-50	10-40	5-20	16-30	2-12
	32-42	Bedrock			---	---	---	---	---	---	---	---
51B:												
Scales----------	0-2	Peat, muck, gravelly mucky peat	PT	A-8	0-5	0-5	---	---	---	---	---	---
	2-11	Mucky peat, muck, gravelly peat	PT	A-8	0-5	0-5	---	---	---	---	---	---
	11-21	Gravelly sandy clay loam, clay loam, loam, gravelly sandy loam, gravelly loamy sand	MH, GC, SM	A-1, A-2, A-7	0-5	0-5	60-95	60-95	40-90	15-55	17-54	2-24
	21-33	Clay loam, sandy clay loam, loam, gravelly sandy loam	CL, GC	A-6, A-7	0-5	0-5	65-95	65-95	50-90	40-75	28-45	12-25
	33-62	Gravelly clay loam, sandy clay loam, loam, gravelly sandy loam	CL, GC	A-6, A-7	0-5	0-5	65-95	65-95	50-90	40-75	28-45	12-25
52C:												
Sylco-----------	0-4	Channery silt loam	CL, GC-GM	A-2, A-6	0	5-20	55-80	50-80	45-80	35-65	21-39	6-17
	4-22	Very channery silt loam, very channery loam, channery silty clay loam	CL, GC, GC-GM	A-2, A-6, A-7	0	5-20	50-85	45-80	40-80	30-70	21-42	6-21
	22-27	Extremely channery silt loam, extremely channery loam, very channery silty clay loam	GC, GC-GM	A-1, A-2, A-7	0	15-30	25-55	20-55	20-55	15-50	20-41	6-21
	27-37	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
52C:												
Sylvatus--------	0-2	Channery silt loam	CL, GC-GM	A-2, A-6	0	5-20	55-80	50-80	45-80	35-65	21-39	6-17
	2-11	Very channery silt loam, very channery clay loam, extremely channery loam, channery silty clay loam	CL, GC, GP-GC	A-1, A-2, A-7	0	5-30	20-85	20-80	15-80	10-70	20-41	6-21
	11-16	Extremely channery silt loam, extremely channery loam, very channery clay loam, very channery silty clay loam	GC, GW-GC	A-1, A-2, A-7	0	15-30	10-50	5-45	5-45	5-45	20-44	6-25
	16-26	Bedrock			---	---	---	---	---	---	---	---
52D:												
Sylco-----------	0-4	Channery silt loam	CL, GC-GM	A-2, A-6	0	5-20	55-80	50-80	45-80	35-65	21-39	6-17
	4-22	Very channery silt loam, very channery loam, channery silty clay loam	CL, GC, GC-GM	A-2, A-6, A-7	0	5-20	50-85	45-80	40-80	30-70	21-42	6-21
	22-27	Extremely channery silt loam, extremely channery loam, very channery silty clay loam	GC, GC-GM	A-1, A-2, A-7	0	15-30	25-55	20-55	20-55	15-50	20-41	6-21
	27-37	Bedrock			---	---	---	---	---	---	---	---
Sylvatus--------	0-2	Channery silt loam	CL, GC-GM	A-2, A-6	0	5-20	55-80	50-80	45-80	35-65	21-39	6-17
	2-11	Very channery silt loam, very channery clay loam, extremely channery loam, channery silty clay loam	CL, GC, GP-GC	A-1, A-2, A-7	0	5-30	20-85	20-80	15-80	10-70	20-41	6-21
	11-16	Extremely channery silt loam, extremely channery loam, very channery clay loam, very channery silty clay loam	GC, GW-GC	A-1, A-2, A-7	0	15-30	10-50	5-45	5-45	5-45	20-44	6-25
	16-26	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
52E:												
Sylco-----------	0-4	Channery silt loam	CL, GC-GM	A-2, A-6	0	5-20	55-80	50-80	45-80	35-65	21-39	6-17
	4-22	Very channery silt loam, very channery loam, channery silty clay loam	CL, GC, GC-GM	A-2, A-6, A-7	0	5-20	50-85	45-80	40-80	30-70	21-42	6-21
	22-27	Extremely channery silt loam, extremely channery loam, very channery silty clay loam	GC, GC-GM	A-1, A-2, A-7	0	15-30	25-55	20-55	20-55	15-50	20-41	6-21
	27-37	Bedrock			---	---	---	---	---	---	---	---
Sylvatus--------	0-2	Channery silt loam	CL, GC-GM	A-2, A-6	0	5-20	55-80	50-80	45-80	35-65	21-39	6-17
	2-11	Very channery silt loam, very channery clay loam, extremely channery loam, channery silty clay loam	CL, GC, GP-GC	A-1, A-2, A-7	0	5-30	20-85	20-80	15-80	10-70	20-41	6-21
	11-16	Extremely channery silt loam, extremely channery loam, very channery clay loam, very channery silty clay loam	GC, GW-GC	A-1, A-2, A-7	0	15-30	10-50	5-45	5-45	5-45	20-44	6-25
	16-26	Bedrock			---	---	---	---	---	---	---	---
53B:												
Tate------------	0-6	Loam	CL, SM, ML	A-4, A-7	0	0-5	80-100	80-100	60-95	45-75	20-45	3-17
	6-12	Sandy loam, sandy clay loam, clay loam, gravelly loam, gravelly fine sandy loam	CL, GC-GM, SC	A-1, A-4, A-7	0-1	0-15	60-100	55-100	40-95	20-60	20-45	6-25
	12-27	Clay loam, sandy clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0-1	0-15	60-100	55-100	45-95	35-80	27-45	12-25
	27-47	Sandy clay loam, loam, gravelly fine sandy loam, very gravelly sandy loam	CL, GP-GC, SC	A-2, A-6, A-7	0-1	0-15	30-95	30-95	20-90	10-55	22-44	7-25
	47-62	Sandy loam, loam, sandy clay loam, very gravelly fine sandy loam, very cobbly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-10	0-30	45-90	40-90	30-85	15-50	16-36	2-17

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
53C:												
Tate	0-6	Loam	CL, SM, ML	A-4, A-7	0	0-5	80-100	80-100	60-95	45-75	20-45	3-17
	6-12	Sandy loam, sandy clay loam, clay loam, gravelly loam, gravelly fine sandy loam	CL, GC-GM, SC	A-1, A-4, A-7	0-1	0-15	60-100	55-100	40-95	20-60	20-45	6-25
	12-27	Clay loam, sandy clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0-1	0-15	60-100	55-100	45-95	35-80	27-45	12-25
	27-47	Sandy clay loam, loam, gravelly fine sandy loam, very gravelly sandy loam	CL, GP-GC, SC	A-2, A-6, A-7	0-1	0-15	30-95	30-95	20-90	10-55	22-44	7-25
	47-62	Sandy loam, loam, sandy clay loam, very gravelly fine sandy loam, very cobbly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-10	0-30	45-90	40-90	30-85	15-50	16-36	2-17
53D:												
Tate	0-6	Loam	CL, SM, ML	A-4, A-7	0	0-5	80-100	80-100	60-95	45-75	20-45	3-17
	6-12	Sandy loam, sandy clay loam, clay loam, gravelly loam, gravelly fine sandy loam	CL, GC-GM, SC	A-1, A-4, A-7	0-1	0-15	60-100	55-100	40-95	20-60	20-45	6-25
	12-27	Clay loam, sandy clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0-1	0-15	60-100	55-100	45-95	35-80	27-45	12-25
	27-47	Sandy clay loam, loam, gravelly fine sandy loam, very gravelly sandy loam	CL, GP-GC, SC	A-2, A-6, A-7	0-1	0-15	30-95	30-95	20-90	10-55	22-44	7-25
	47-62	Sandy loam, loam, sandy clay loam, very gravelly fine sandy loam, very cobbly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-10	0-30	45-90	40-90	30-85	15-50	16-36	2-17

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
53E:												
Tate------------	0-6	Loam	CL, SM, ML	A-4, A-7	0	0-5	80-100	80-100	60-95	45-75	20-45	3-17
	6-12	Sandy loam, sandy clay loam, clay loam, gravelly loam, gravelly fine sandy loam	CL, GC-GM, SC	A-1, A-4, A-7	0-1	0-15	60-100	55-100	40-95	20-60	20-45	6-25
	12-27	Clay loam, sandy clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0-1	0-15	60-100	55-100	45-95	35-80	27-45	12-25
	27-47	Sandy clay loam, loam, gravelly fine sandy loam, very gravelly sandy loam	CL, GP-GC, SC	A-2, A-6, A-7	0-1	0-15	30-95	30-95	20-90	10-55	22-44	7-25
	47-62	Sandy loam, loam, sandy clay loam, very gravelly fine sandy loam, very cobbly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-10	0-30	45-90	40-90	30-85	15-50	16-36	2-17
54C:												
Tate------------	0-6	Loam	CL, SM, ML	A-4, A-7	0	0-5	80-100	80-100	60-95	45-75	20-45	3-17
	6-12	Sandy loam, sandy clay loam, clay loam, gravelly loam, gravelly fine sandy loam	CL, GC-GM, SC	A-1, A-4, A-7	0-1	0-15	60-100	55-100	40-95	20-60	20-45	6-25
	12-27	Clay loam, sandy clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0-1	0-15	60-100	55-100	45-95	35-80	27-45	12-25
	27-47	Sandy clay loam, loam, gravelly fine sandy loam, very gravelly sandy loam	CL, GP-GC, SC	A-2, A-6, A-7	0-1	0-15	30-95	30-95	20-90	10-55	22-44	7-25
	47-62	Sandy loam, loam, sandy clay loam, very gravelly fine sandy loam, very cobbly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-10	0-30	45-90	40-90	30-85	15-50	16-36	2-17

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plas- ticity index
	In				Pct	Pct					Pct	
54D:												
Tate------------	0-6	Loam	CL, SM, ML	A-4, A-7	0	0-5	80-100	80-100	60-95	45-75	20-45	3-17
	6-12	Sandy loam, sandy clay loam, clay loam, gravelly loam, gravelly fine sandy loam	CL, GC-GM, SC	A-1, A-4, A-7	0-1	0-15	60-100	55-100	40-95	20-60	20-45	6-25
	12-27	Clay loam, sandy clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0-1	0-15	60-100	55-100	45-95	35-80	27-45	12-25
	27-47	Sandy clay loam, loam, gravelly fine sandy loam, very gravelly sandy loam	CL, GP-GC, SC	A-2, A-6, A-7	0-1	0-15	30-95	30-95	20-90	10-55	22-44	7-25
	47-62	Sandy loam, loam, sandy clay loam, very gravelly fine sandy loam, very cobbly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-10	0-30	45-90	40-90	30-85	15-50	16-36	2-17
54E:												
Tate------------	0-6	Loam	CL, SM, ML	A-4, A-7	0	0-5	80-100	80-100	60-95	45-75	20-45	3-17
	6-12	Sandy loam, sandy clay loam, clay loam, gravelly loam, gravelly fine sandy loam	CL, GC-GM, SC	A-1, A-4, A-7	0-1	0-15	60-100	55-100	40-95	20-60	20-45	6-25
	12-27	Clay loam, sandy clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0-1	0-15	60-100	55-100	45-95	35-80	27-45	12-25
	27-47	Sandy clay loam, loam, gravelly fine sandy loam, very gravelly sandy loam	CL, GP-GC, SC	A-2, A-6, A-7	0-1	0-15	30-95	30-95	20-90	10-55	22-44	7-25
	47-62	Sandy loam, loam, sandy clay loam, very gravelly fine sandy loam, very cobbly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-10	0-30	45-90	40-90	30-85	15-50	16-36	2-17

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments: >10 inches	Fragments: 3-10 inches	Percentage passing sieve number--: 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
55D:												
Tate------------	0-6	Loam	CL, SM, ML	A-4, A-7	0	0-5	80-100	80-100	60-95	45-75	20-45	3-17
	6-12	Sandy loam, sandy clay loam, clay loam, gravelly loam, gravelly fine sandy loam	CL, GC-GM, SC	A-1, A-4, A-7	0-1	0-15	60-100	55-100	40-95	20-60	20-45	6-25
	12-27	Clay loam, sandy clay loam, gravelly loam	CL, GC	A-2, A-6, A-7	0-1	0-15	60-100	55-100	45-95	35-80	27-45	12-25
	27-47	Sandy clay loam, loam, gravelly fine sandy loam, very gravelly sandy loam	CL, GP-GC, SC	A-2, A-6, A-7	0-1	0-15	30-95	30-95	20-90	10-55	22-44	7-25
	47-62	Sandy loam, loam, sandy clay loam, very gravelly fine sandy loam, very cobbly loamy sand	GM, SC, SC-SM	A-1, A-2, A-6	0-10	0-30	45-90	40-90	30-85	15-50	16-36	2-17
56C:												
Thunder---------	0-5	Cobbly loam	CL, CL-ML, SM	A-4	0-5	15-30	75-95	75-90	60-90	40-65	13-31	NP-10
	5-12	Very cobbly loam, cobbly loam	CL, CL-ML, GM	A-2, A-4	0-10	15-40	55-95	55-90	40-90	30-65	13-31	NP-10
	12-21	Very cobbly loam, cobbly loam, extremely cobbly sandy loam	CL, CL-ML, GM	A-1, A-4	0-15	25-45	25-90	25-90	15-90	15-65	13-31	NP-10
	21-50	Very cobbly sandy clay loam, very cobbly clay loam, extremely cobbly clay loam, very stony loam	CL, GP-GC, SC	A-1, A-2, A-7	0-25	30-45	30-80	25-80	20-80	10-55	20-43	4-17
	50-62	Extremely cobbly sandy loam, very cobbly sandy clay loam, extremely cobbly clay loam, very stony sandy loam	GC, GC-GM, GP-GM	A-1, A-6	0-25	30-45	30-80	25-80	15-80	10-50	12-38	NP-14

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plasticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
56D:												
Thunder----------	0-5	Cobbly loam	CL, CL-ML, SM	A-4	0-5	15-30	75-95	75-90	60-90	40-65	13-31	NP-10
	5-12	Very cobbly loam, cobbly loam	CL, CL-ML, GM	A-2, A-4	0-10	15-40	55-95	55-90	40-90	30-65	13-31	NP-10
	12-21	Very cobbly loam, cobbly loam, extremely cobbly sandy loam	CL, CL-ML, GM	A-1, A-4	0-15	25-45	25-90	25-90	15-90	15-65	13-31	NP-10
	21-50	Very cobbly sandy clay loam, very cobbly clay loam, extremely cobbly clay loam, very stony loam	CL, GP-GC, SC	A-1, A-2, A-7	0-25	30-45	30-80	25-80	20-80	10-55	20-43	4-17
	50-62	Extremely cobbly sandy loam, very cobbly sandy clay loam, extremely cobbly clay loam, very stony sandy loam	GC, GC-GM, GP-GM	A-1, A-6	0-25	30-45	30-80	25-80	15-80	10-50	12-38	NP-14
56E:												
Thunder----------	0-5	Cobbly loam	CL, CL-ML, SM	A-4	0-5	15-30	75-95	75-90	60-90	40-65	13-31	NP-10
	5-12	Very cobbly loam, cobbly loam	CL, CL-ML, GM	A-2, A-4	0-10	15-40	55-95	55-90	40-90	30-65	13-31	NP-10
	12-21	Very cobbly loam, cobbly loam, extremely cobbly sandy loam	CL, CL-ML, GM	A-1, A-4	0-15	25-45	25-90	25-90	15-90	15-65	13-31	NP-10
	21-50	Very cobbly sandy clay loam, very cobbly clay loam, extremely cobbly clay loam, very stony loam	CL, GP-GC, SC	A-1, A-2, A-7	0-25	30-45	30-80	25-80	20-80	10-55	20-43	4-17
	50-62	Extremely cobbly sandy loam, very cobbly sandy clay loam, extremely cobbly clay loam, very stony sandy loam	GC, GC-GM, GP-GM	A-1, A-6	0-25	30-45	30-80	25-80	15-80	10-50	12-38	NP-14

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
57C:												
Thunder---------	0-5	Cobbly loam	CL, CL-ML, SM	A-4	0-5	15-30	75-95	75-90	60-90	40-65	13-31	NP-10
	5-12	Very cobbly loam, cobbly loam	CL, CL-ML, GM	A-2, A-4	0-10	15-40	55-95	55-90	40-90	30-65	13-31	NP-10
	12-21	Very cobbly loam, cobbly loam, extremely cobbly sandy loam	CL, CL-ML, GM	A-1, A-4	0-15	25-45	25-90	25-90	15-90	15-65	13-31	NP-10
	21-50	Very cobbly sandy clay loam, very cobbly clay loam, extremely cobbly clay loam, very stony loam	CL, GP-GC, SC	A-1, A-2, A-7	0-25	30-45	30-80	25-80	20-80	10-55	20-43	4-17
	50-62	Extremely cobbly sandy loam, very cobbly sandy clay loam, extremely cobbly clay loam, very stony sandy loam	GC, GC-GM, GP-GM	A-1, A-6	0-25	30-45	30-80	25-80	15-80	10-50	12-38	NP-14
57D:												
Thunder---------	0-5	Cobbly loam	CL, CL-ML, SM	A-4	0-5	15-30	75-95	75-90	60-90	40-65	13-31	NP-10
	5-12	Very cobbly loam, cobbly loam	CL, CL-ML, GM	A-2, A-4	0-10	15-40	55-95	55-90	40-90	30-65	13-31	NP-10
	12-21	Very cobbly loam, cobbly loam, extremely cobbly sandy loam	CL, CL-ML, GM	A-1, A-4	0-15	25-45	25-90	25-90	15-90	15-65	13-31	NP-10
	21-50	Very cobbly sandy clay loam, very cobbly clay loam, extremely cobbly clay loam, very stony loam	CL, GP-GC, SC	A-1, A-2, A-7	0-25	30-45	30-80	25-80	20-80	10-55	20-43	4-17
	50-62	Extremely cobbly sandy loam, very cobbly sandy clay loam, extremely cobbly clay loam, very stony sandy loam	GC, GC-GM, GP-GM	A-1, A-6	0-25	30-45	30-80	25-80	15-80	10-50	12-38	NP-14

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification: Unified	Classification: AASHTO	Fragments >10 inches	Fragments 3-10 inches	Percentage passing sieve number-- 4	10	40	200	Liquid limit	Plasticity index
	In				Pct	Pct					Pct	
57E:												
Thunder	0-5	Cobbly loam	CL, CL-ML, SM	A-4	0-5	15-30	75-95	75-90	60-90	40-65	13-31	NP-10
	5-12	Very cobbly loam, cobbly loam	CL, CL-ML, GM	A-2, A-4	0-10	15-40	55-95	55-90	40-90	30-65	13-31	NP-10
	12-21	Very cobbly loam, cobbly loam, extremely cobbly sandy loam	CL, CL-ML, GM	A-1, A-4	0-15	25-45	25-90	25-90	15-90	15-65	13-31	NP-10
	21-50	Very cobbly sandy clay loam, very cobbly clay loam, extremely cobbly clay loam, very stony loam	CL, GP-GC, SC	A-1, A-2, A-7	0-25	30-45	30-80	25-80	20-80	10-55	20-43	4-17
	50-62	Extremely cobbly sandy loam, very cobbly sandy clay loam, extremely cobbly clay loam, very stony sandy loam	GC, GC-GM, GP-GM	A-1, A-6	0-25	30-45	30-80	25-80	15-80	10-50	12-38	NP-14
58D. Udorthents-Urban land												
59D:												
Unicoi	0-5	Very gravelly sandy loam	GC, GC-GM, GP-GM	A-1, A-2	0	0-10	30-55	30-50	20-45	10-25	17-35	2-13
	5-14	Very gravelly sandy loam, extremely gravelly fine sandy loam, very gravelly loam	GC, GC-GM, GP-GM	A-1, A-2	0	0-10	30-55	30-50	20-45	10-25	16-32	2-13
	14-19	Extremely gravelly sandy loam, extremely gravelly fine sandy loam, very gravelly loam	GC, GC-GM, GP-GM	A-1, A-2	0	0-10	30-55	30-50	20-45	10-25	16-32	2-13
	19-29	Bedrock			---	---	---	---	---	---	---	---

Table 15.—Engineering Soil Properties—Continued

Map symbol and soil name	Depth	USDA texture	Classification		Fragments		Percentage passing sieve number--				Liquid limit	Plas- ticity index
			Unified	AASHTO	>10 inches	3-10 inches	4	10	40	200		
	In				Pct	Pct					Pct	
59E:												
Unicoi----------	0-5	Very gravelly sandy loam	GC, GC-GM, GP-GM	A-1, A-2	0	0-10	30-55	30-50	20-45	10-25	17-35	2-13
	5-14	Very gravelly sandy loam, extremely gravelly fine sandy loam, very gravelly loam	GC, GC-GM, GP-GM	A-1, A-2	0	0-10	30-55	30-50	20-45	10-25	16-32	2-13
	14-19	Extremely gravelly sandy loam, extremely gravelly fine sandy loam, very gravelly loam	GC, GC-GM, GP-GM	A-1, A-2	0	0-10	30-55	30-50	20-45	10-25	16-32	2-13
	19-29	Bedrock			---	---	---	---	---	---	---	---
W.												
Water												

Table 16.—Physical Soil Properties

(Entries under "Erosion factors--T" apply to the entire profile. Entries under "Wind erodibility group" and "Wind erodibility index" apply only to the surface layer. Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
1C:														
Balsam----------------	0-19	25-50	30-50	4-27	0.50-1.00	14.00-42.00	0.20-0.25	0.0-2.9	8.0-20	.10	.20	5	5	48
	19-35	25-80	10-50	4-27	1.00-1.50	14.00-42.00	0.09-0.17	0.0-2.9	1.0-5.0	.05	.17			
	35-48	25-80	10-50	4-27	1.00-1.50	14.00-42.00	0.09-0.15	0.0-2.9	0.5-2.0	.05	.17			
	48-62	25-85	10-50	2-15	1.20-1.60	14.00-42.00	0.02-0.14	0.0-2.9	0.5-1.0	.05	.20			
1D:														
Balsam----------------	0-19	25-50	30-50	4-27	0.50-1.00	14.00-42.00	0.20-0.25	0.0-2.9	8.0-20	.10	.20	5	5	48
	19-35	25-80	10-50	4-27	1.00-1.50	14.00-42.00	0.09-0.17	0.0-2.9	1.0-5.0	.05	.17			
	35-48	25-80	10-50	4-27	1.00-1.50	14.00-42.00	0.09-0.15	0.0-2.9	0.5-2.0	.05	.17			
	48-62	25-85	10-50	2-15	1.20-1.60	14.00-42.00	0.02-0.14	0.0-2.9	0.5-1.0	.05	.20			
1E:														
Balsam----------------	0-19	25-50	30-50	4-27	0.50-1.00	14.00-42.00	0.20-0.25	0.0-2.9	8.0-20	.10	.20	5	5	48
	19-35	25-80	10-50	4-27	1.00-1.50	14.00-42.00	0.09-0.17	0.0-2.9	1.0-5.0	.05	.17			
	35-48	25-80	10-50	4-27	1.00-1.50	14.00-42.00	0.09-0.15	0.0-2.9	0.5-2.0	.05	.17			
	48-62	25-85	10-50	2-15	1.20-1.60	14.00-42.00	0.02-0.14	0.0-2.9	0.5-1.0	.05	.20			
2D:														
Balsam----------------	0-19	25-50	30-50	4-27	0.50-1.00	14.00-42.00	0.20-0.25	0.0-2.9	8.0-20	.10	.20	5	5	48
	19-35	25-80	10-50	4-27	1.00-1.50	14.00-42.00	0.09-0.17	0.0-2.9	1.0-5.0	.05	.17			
	35-48	25-80	10-50	4-27	1.00-1.50	14.00-42.00	0.09-0.15	0.0-2.9	0.5-2.0	.05	.17			
	48-62	25-85	10-50	2-15	1.20-1.60	14.00-42.00	0.02-0.14	0.0-2.9	0.5-1.0	.05	.20			
Nopan-----------------	0-6	35-50	30-50	7-18	0.50-1.00	4.00-14.00	0.10-0.21	0.0-2.9	10-25	.32	.32	4	5	56
	6-17	40-85	5-50	2-18	1.00-1.50	4.00-14.00	0.06-0.21	0.0-2.9	0.5-5.0	.43	.43			
	17-33	40-85	5-50	2-18	1.00-1.50	4.00-14.00	0.06-0.21	0.0-2.9	0.5-5.0	.15	.20			
	33-50	40-85	5-50	2-18	1.35-1.75	0.01-1.40	0.06-0.21	0.0-2.9	0.5-7.0	.24	.28			
	50-62	40-85	5-50	2-18	1.35-1.75	0.01-1.40	0.07-0.19	0.0-2.9	0.5-1.0	.24	.32			
2E:														
Balsam----------------	0-19	25-50	30-50	4-27	0.50-1.00	14.00-42.00	0.20-0.25	0.0-2.9	8.0-20	.10	.20	5	5	48
	19-35	25-80	10-50	4-27	1.00-1.50	14.00-42.00	0.09-0.17	0.0-2.9	1.0-5.0	.05	.17			
	35-48	25-80	10-50	4-27	1.00-1.50	14.00-42.00	0.09-0.15	0.0-2.9	0.5-2.0	.05	.17			
	48-62	25-85	10-50	2-15	1.20-1.60	14.00-42.00	0.02-0.14	0.0-2.9	0.5-1.0	.05	.20			
Nopan-----------------	0-6	35-50	30-50	7-18	0.50-1.00	4.00-14.00	0.10-0.21	0.0-2.9	10-25	.32	.32	4	5	56
	6-17	40-85	5-50	2-18	1.00-1.50	4.00-14.00	0.06-0.21	0.0-2.9	0.5-5.0	.43	.43			
	17-33	40-85	5-50	2-18	1.00-1.50	4.00-14.00	0.06-0.21	0.0-2.9	0.5-5.0	.15	.20			
	33-50	40-85	5-50	2-18	1.35-1.75	0.01-1.40	0.06-0.21	0.0-2.9	0.5-7.0	.24	.28			
	50-62	40-85	5-50	2-18	1.35-1.75	0.01-1.40	0.07-0.19	0.0-2.9	0.5-1.0	.24	.32			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
3D:														
Bloodyhorse----------	0-12	30-50	30-50	7-25	0.50-1.00	14.00-42.00	0.09-0.13	0.0-2.9	8.0-20	.17	.28	2	5	48
	12-28	20-75	5-75	5-25	1.00-1.50	14.00-42.00	0.01-0.13	0.0-2.9	0.5-5.0	.15	.37			
	28-37	20-75	5-75	5-25	1.20-1.60	14.00-42.00	0.01-0.08	0.0-2.9	0.5-1.0	.10	.43			
	37-47	---	---	---	---	0.00-0.07	---	---	---	---	---			
4F:														
Bloodyhorse----------	0-12	30-50	30-50	7-25	0.50-1.00	14.00-42.00	0.09-0.13	0.0-2.9	8.0-20	.17	.28	2	5	48
	12-28	20-75	5-75	5-25	1.00-1.50	14.00-42.00	0.01-0.13	0.0-2.9	0.5-5.0	.15	.37			
	28-37	20-75	5-75	5-25	1.20-1.60	14.00-42.00	0.01-0.08	0.0-2.9	0.5-1.0	.10	.43			
	37-47	---	---	---	---	0.00-0.07	---	---	---	---	---			
5B:														
Braddock-------------	0-8	25-50	30-50	10-25	1.20-1.50	4.00-42.00	0.15-0.19	0.0-2.9	1.0-2.0	.32	.32	5	5	56
	8-15	20-60	10-50	27-50	1.20-1.50	4.00-14.00	0.08-0.13	0.0-2.9	0.5-1.0	.28	.28			
	15-51	10-55	5-50	35-55	1.20-1.50	4.00-14.00	0.08-0.15	3.0-5.9	0.0-0.5	.20	.20			
	51-62	10-55	5-50	35-50	1.20-1.50	4.00-14.00	0.07-0.15	3.0-5.9	0.0-0.5	.28	.28			
5C:														
Braddock-------------	0-8	25-50	30-50	10-25	1.20-1.50	4.00-42.00	0.15-0.19	0.0-2.9	1.0-2.0	.32	.32	5	5	56
	8-15	20-60	10-50	27-50	1.20-1.50	4.00-14.00	0.08-0.13	0.0-2.9	0.5-1.0	.28	.28			
	15-51	10-55	5-50	35-55	1.20-1.50	4.00-14.00	0.08-0.15	3.0-5.9	0.0-0.5	.20	.20			
	51-62	10-55	5-50	35-50	1.20-1.50	4.00-14.00	0.07-0.15	3.0-5.9	0.0-0.5	.28	.28			
5D:														
Braddock-------------	0-8	25-50	30-50	10-25	1.20-1.50	4.00-42.00	0.15-0.19	0.0-2.9	1.0-2.0	.32	.32	5	5	56
	8-15	20-60	10-50	27-50	1.20-1.50	4.00-14.00	0.08-0.13	0.0-2.9	0.5-1.0	.28	.28			
	15-51	10-55	5-50	35-55	1.20-1.50	4.00-14.00	0.08-0.15	3.0-5.9	0.0-0.5	.20	.20			
	51-62	10-55	5-50	35-50	1.20-1.50	4.00-14.00	0.07-0.15	3.0-5.9	0.0-0.5	.28	.28			
6E:														
Braddock-------------	0-8	25-50	30-50	10-25	1.20-1.50	4.00-42.00	0.17-0.19	0.0-2.9	1.0-2.0	.20	.32	5	5	48
	8-15	20-60	10-50	27-50	1.20-1.50	4.00-14.00	0.11-0.13	0.0-2.9	0.5-1.0	.17	.28			
	15-51	10-55	5-50	35-55	1.20-1.50	4.00-14.00	0.10-0.15	3.0-5.9	0.0-0.5	.15	.20			
	51-62	10-55	5-50	35-50	1.20-1.50	4.00-14.00	0.08-0.15	3.0-5.9	0.0-0.5	.20	.28			
7D:														
Brevard--------------	0-8	30-75	10-50	5-20	1.30-1.60	14.00-42.00	0.07-0.15	0.0-2.9	1.0-8.0	.15	.24	5	4	86
	8-48	25-65	10-50	18-35	1.30-1.50	4.00-14.00	0.12-0.18	0.0-2.9	0.2-1.0	.20	.32			
	48-60	30-85	5-40	5-25	1.35-1.60	14.00-42.00	0.07-0.15	0.0-2.9	0.1-1.0	.10	.24			
Greenlee-------------	0-7	25-50	30-50	8-25	1.30-1.50	14.00-42.00	0.11-0.14	0.0-2.9	0.5-5.0	.10	.28	5	5	38
	7-53	25-80	5-50	3-25	1.40-1.60	14.00-42.00	0.07-0.15	0.0-2.9	1.0-2.0	.05	.24			
	53-62	35-90	5-50	1-18	1.40-1.60	14.00-42.00	0.03-0.15	0.0-2.9	0.0-0.5	.05	.28			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
8C:														
Burton	0-13	25-50	30-50	10-22	1.10-1.30	14.00-42.00	0.18-0.21	0.0-2.9	8.0-20	.24	.28	2	5	56
	13-21	25-70	10-50	15-25	1.35-1.60	14.00-42.00	0.08-0.19	0.0-2.9	0.5-5.0	.17	.24			
	21-26	25-85	5-50	5-25	1.45-1.65	14.00-42.00	0.04-0.19	0.0-2.9	0.0-1.0	.10	.24			
	26-31	---	---	---	---	0.00-0.42	0.00-0.01	---	---	---	---			
	31-42	---	---	---	---	0.00-0.07	0.00-0.01	---	---	---	---			
9D:														
Burton	0-13	25-50	30-50	10-22	1.10-1.30	14.00-42.00	0.18-0.21	0.0-2.9	8.0-20	.24	.28	2	8	0
	13-21	25-70	10-50	15-25	1.35-1.60	14.00-42.00	0.08-0.19	0.0-2.9	0.5-5.0	.17	.24			
	21-26	25-85	5-50	5-25	1.45-1.65	14.00-42.00	0.04-0.19	0.0-2.9	0.0-1.0	.10	.24			
	26-31	---	---	---	---	0.00-0.42	0.00-0.01	---	---	---	---			
	31-42	---	---	---	---	0.00-0.07	0.00-0.01	---	---	---	---			
9E:														
Burton	0-13	25-50	30-50	10-22	1.10-1.30	14.00-42.00	0.18-0.21	0.0-2.9	8.0-20	.24	.28	2	8	0
	13-21	25-70	10-50	15-25	1.35-1.60	14.00-42.00	0.08-0.19	0.0-2.9	0.5-5.0	.17	.24			
	21-26	25-85	5-50	5-25	1.45-1.65	14.00-42.00	0.04-0.19	0.0-2.9	0.0-1.0	.10	.24			
	26-31	---	---	---	---	0.00-0.42	0.00-0.01	---	---	---	---			
	31-42	---	---	---	---	0.00-0.07	0.00-0.01	---	---	---	---			
10D:														
Peaks	0-4	35-50	35-50	7-16	1.20-1.40	42.00-141.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.37	2	5	38
	4-8	35-70	15-50	4-16	1.20-1.40	42.00-141.00	0.03-0.14	0.0-2.9	0.0-0.5	.17	.49			
	8-23	30-70	15-50	5-18	1.20-1.40	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	23-32	35-85	5-50	5-18	1.20-1.40	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.5	.05	.28			
	32-42	---	---	---	---	0.00-0.42	---	---	---	---	---			
Chestnut	0-3	30-75	10-45	5-20	1.35-1.60	14.00-42.00	0.09-0.18	0.0-2.9	1.0-8.0	.15	.24	3	4	86
	3-21	30-75	10-45	5-20	1.35-1.60	14.00-42.00	0.09-0.18	0.0-2.9	0.2-1.0	.15	.24			
	21-29	30-85	5-45	5-20	1.35-1.60	14.00-42.00	0.06-0.15	0.0-2.9	0.1-1.0	.15	.24			
	29-45	---	---	---	---	0.01-0.06	0.00-0.01	---	---	---	---			
	45-80	---	---	---	---	0.00-0.01	0.00-0.01	---	---	---	---			
10E:														
Chestnut	0-3	30-75	10-45	5-20	1.35-1.60	14.00-42.00	0.09-0.18	0.0-2.9	1.0-8.0	.15	.24	3	4	86
	3-21	30-75	10-45	5-20	1.35-1.60	14.00-42.00	0.09-0.18	0.0-2.9	0.2-1.0	.15	.24			
	21-29	30-85	5-45	5-20	1.35-1.60	14.00-42.00	0.06-0.15	0.0-2.9	0.1-1.0	.15	.24			
	29-45	---	---	---	---	0.01-0.06	0.00-0.01	---	---	---	---			
	45-80	---	---	---	---	0.00-0.01	0.00-0.01	---	---	---	---			
Peaks	0-4	35-50	35-50	7-16	1.20-1.40	42.00-141.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.37	2	5	38
	4-8	35-70	15-50	4-16	1.20-1.40	42.00-141.00	0.03-0.14	0.0-2.9	0.0-0.5	.17	.49			
	8-23	30-70	15-50	5-18	1.20-1.40	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	23-32	35-85	5-50	5-18	1.20-1.40	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.5	.05	.28			
	32-42	---	---	---	---	0.00-0.42	---	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
11F:														
Chestnut-------------	0-3	30-75	10-45	5-20	1.35-1.60	14.00-42.00	0.09-0.18	0.0-2.9	1.0-8.0	.15	.24	3	4	86
	3-21	30-75	10-45	5-20	1.35-1.60	14.00-42.00	0.09-0.18	0.0-2.9	0.2-1.0	.15	.24			
	21-29	30-85	5-45	5-20	1.35-1.60	14.00-42.00	0.06-0.15	0.0-2.9	0.1-1.0	.15	.24			
	29-45	---	---	---	---	0.01-0.06	0.00-0.01	---	---	---	---			
	45-80	---	---	---	---	0.00-0.01	0.00-0.01	---	---	---	---			
Peaks----------------	0-4	35-50	35-50	7-16	1.20-1.40	42.00-141.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.37	2	5	38
	4-8	35-70	15-50	4-16	1.20-1.40	42.00-141.00	0.03-0.14	0.0-2.9	0.0-0.5	.17	.49			
	8-23	30-70	15-50	5-18	1.20-1.40	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	23-32	35-85	5-50	5-18	1.20-1.40	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.5	.05	.28			
	32-42	---	---	---	---	0.00-0.42	---	---	---	---	---			
Tuckasegee-----------	0-13	30-75	10-50	5-20	1.20-1.50	14.00-42.00	0.11-0.18	0.0-2.9	3.0-8.0	.17	.24	5	6	48
	13-47	30-75	10-50	9-25	1.30-1.60	14.00-42.00	0.09-0.19	0.0-2.9	0.5-3.0	.20	.24			
	47-79	30-85	5-50	5-20	1.30-1.60	14.00-42.00	0.05-0.19	0.0-2.9	0.5-3.0	.20	.24			
12A:														
Codorus--------------	0-7	30-50	30-50	15-25	1.20-1.40	4.00-14.00	0.13-0.21	0.0-2.9	2.0-4.0	.24	.24	5	6	48
	7-19	10-45	25-60	18-35	1.20-1.50	4.00-14.00	0.09-0.22	0.0-2.9	0.0-0.5	.37	.37			
	19-37	10-45	25-60	18-35	1.20-1.50	4.00-14.00	0.09-0.22	0.0-2.9	0.0-0.5	.37	.37			
	37-49	10-70	10-70	10-35	1.20-1.50	4.00-141.00	0.08-0.22	0.0-2.9	0.0-0.5	.15	.20			
	49-62	10-70	10-70	10-35	1.20-1.50	4.00-141.00	0.02-0.22	0.0-2.9	0.0-0.5	.10	.20			
13A:														
Comus----------------	0-9	55-75	10-35	5-18	1.20-1.40	4.00-14.00	0.12-0.18	0.0-2.9	1.0-4.0	.17	.17	5	3	86
	9-31	20-75	10-70	5-18	1.20-1.40	4.00-14.00	0.12-0.22	0.0-2.9	0.0-0.8	.28	.28			
	31-53	20-75	10-70	5-18	1.30-1.60	4.00-42.00	0.07-0.22	0.0-2.9	0.0-0.8	.28	.28			
	53-62	20-95	5-70	2-18	1.30-1.60	4.00-42.00	0.05-0.22	0.0-2.9	0.0-0.8	.17	.28			
14C:														
Cowee----------------	0-6	35-50	30-50	8-20	1.25-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-5.0	.24	.28	3	5	56
	6-27	25-65	10-50	18-35	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.28			
	27-39	35-70	10-50	10-25	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.0-0.8	.17	.24			
	39-45	---	---	---	---	0.01-1.40	---	---	---	---	---			
14D:														
Cowee----------------	0-6	35-50	30-50	8-20	1.25-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-5.0	.24	.28	3	5	56
	6-27	25-65	10-50	18-35	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.28			
	27-39	35-70	10-50	10-25	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.0-0.8	.17	.24			
	39-45	---	---	---	---	0.01-1.40	---	---	---	---	---			
14E:														
Cowee----------------	0-6	35-50	30-50	8-20	1.25-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-5.0	.24	.28	3	5	56
	6-27	25-65	10-50	18-35	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.28			
	27-39	35-70	10-50	10-25	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.0-0.8	.17	.24			
	39-45	---	---	---	---	0.01-1.40	---	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
15D:														
Cowee----------------	0-6	35-50	30-50	8-20	1.25-1.60	14.00-42.00	0.11-0.21	0.0-2.9	1.0-5.0	.15	.28	3	5	48
	6-27	25-65	10-50	18-35	1.30-1.60	4.00-14.00	0.07-0.19	0.0-2.9	0.5-1.0	.15	.28			
	27-39	35-70	10-50	10-25	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.0-0.8	.10	.24			
	39-45	---	---	---	---	0.01-1.40	---	---	---	---	---			
15E:														
Cowee----------------	0-6	35-50	30-50	8-20	1.25-1.60	14.00-42.00	0.11-0.21	0.0-2.9	1.0-5.0	.15	.28	3	5	48
	6-27	25-65	10-50	18-35	1.30-1.60	4.00-14.00	0.07-0.19	0.0-2.9	0.5-1.0	.15	.28			
	27-39	35-70	10-50	10-25	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.0-0.8	.10	.24			
	39-45	---	---	---	---	0.01-1.40	---	---	---	---	---			
16D:														
Cowee----------------	0-6	35-50	30-50	8-20	1.25-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-5.0	.24	.28	3	5	56
	6-27	25-65	10-50	18-35	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.28			
	27-39	35-70	10-50	10-25	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.0-0.8	.17	.24			
	39-45	---	---	---	---	0.01-1.40	---	---	---	---	---			
Rock outcrop.														
16E:														
Cowee----------------	0-6	35-50	30-50	8-20	1.25-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-5.0	.24	.28	3	5	56
	6-27	25-65	10-50	18-35	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.5-1.0	.24	.28			
	27-39	35-70	10-50	10-25	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.0-0.8	.17	.24			
	39-45	---	---	---	---	0.01-1.40	---	---	---	---	---			
Rock outcrop.														
17A:														
Craigsville----------	0-6	55-75	10-40	5-15	1.20-1.40	14.00-141.00	0.09-0.14	0.0-2.9	1.0-4.0	.10	.17	5	3	56
	6-32	40-75	10-50	5-15	1.30-1.60	14.00-141.00	0.05-0.13	0.0-2.9	0.0-0.8	.10	.28			
	32-62	55-85	5-40	5-10	1.35-1.55	42.00-141.00	0.04-0.09	0.0-2.9	0.0-0.8	.05	.17			
18C:														
Cullasaja------------	0-6	30-50	30-45	8-25	0.50-1.20	14.00-42.00	0.15-0.18	0.0-2.9	5.0-15	.15	.20	5	5	48
	6-21	30-50	30-45	8-25	0.50-1.20	14.00-42.00	0.08-0.18	0.0-2.9	5.0-15	.10	.24			
	21-42	30-70	10-45	5-25	1.00-1.60	14.00-42.00	0.06-0.15	0.0-2.9	0.5-2.0	.10	.37			
	42-62	40-85	5-45	2-15	1.00-1.60	14.00-42.00	0.03-0.15	0.0-2.9	0.5-1.0	.05	.24			
18D:														
Cullasaja------------	0-6	30-50	30-45	8-25	0.50-1.20	14.00-42.00	0.15-0.18	0.0-2.9	5.0-15	.15	.20	5	5	48
	6-21	30-50	30-45	8-25	0.50-1.20	14.00-42.00	0.08-0.18	0.0-2.9	5.0-15	.10	.24			
	21-42	30-70	10-45	5-25	1.00-1.60	14.00-42.00	0.06-0.15	0.0-2.9	0.5-2.0	.10	.37			
	42-62	40-85	5-45	2-15	1.00-1.60	14.00-42.00	0.03-0.15	0.0-2.9	0.5-1.0	.05	.24			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Kf	T	Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
19A:														
Delanco	0-10	55-75	10-40	5-18	1.10-1.30	4.00-14.00	0.11-0.18	0.0-2.9	2.0-4.0	.20	.20	5	3	86
	10-16	35-75	10-45	5-18	1.10-1.30	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.8	.28	.28			
	16-41	30-65	10-40	18-30	1.40-1.60	1.40-4.00	0.09-0.13	3.0-5.9	0.0-0.5	.17	.20			
	41-47	20-75	10-60	15-27	1.40-1.60	1.40-4.00	0.09-0.22	3.0-5.9	0.0-0.5	.37	.37			
	47-62	20-75	10-65	5-25	1.50-1.70	4.00-14.00	0.08-0.21	0.0-2.9	0.0-0.5	.28	.28			
19B:														
Delanco	0-10	55-75	10-40	5-18	1.10-1.30	4.00-14.00	0.11-0.18	0.0-2.9	2.0-4.0	.20	.20	5	3	86
	10-16	35-75	10-45	5-18	1.10-1.30	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.8	.28	.28			
	16-41	30-65	10-40	18-30	1.40-1.60	1.40-4.00	0.09-0.13	3.0-5.9	0.0-0.5	.17	.20			
	41-47	20-75	10-60	15-27	1.40-1.60	1.40-4.00	0.09-0.22	3.0-5.9	0.0-0.5	.37	.37			
	47-62	20-75	10-65	5-25	1.50-1.70	4.00-14.00	0.08-0.21	0.0-2.9	0.0-0.5	.28	.28			
20C:														
Delanco	0-10	55-75	10-40	5-18	1.10-1.30	4.00-14.00	0.11-0.18	0.0-2.9	2.0-4.0	.20	.20	5	3	86
	10-16	35-75	10-45	5-18	1.10-1.30	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.8	.28	.28			
	16-41	30-65	10-40	18-30	1.40-1.60	1.40-4.00	0.09-0.13	3.0-5.9	0.0-0.5	.17	.20			
	41-47	20-75	10-60	15-27	1.40-1.60	1.40-4.00	0.09-0.22	3.0-5.9	0.0-0.5	.37	.37			
	47-62	20-75	10-65	5-25	1.50-1.70	4.00-14.00	0.08-0.21	0.0-2.9	0.0-0.5	.28	.28			
21B:														
Edneytown	0-4	35-50	35-50	5-15	1.40-1.60	14.00-42.00	0.14-0.19	0.0-2.9	0.5-5.0	.37	.37	5	5	56
	4-7	35-80	5-50	5-15	1.30-1.40	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.49	.49			
	7-20	20-80	5-50	20-35	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.24	.24			
	20-27	45-80	5-40	10-25	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	27-62	50-85	2-40	5-15	1.30-1.50	14.00-42.00	0.08-0.19	0.0-2.9	0.0-0.5	.15	.15			
21C:														
Edneytown	0-4	35-50	35-50	5-15	1.40-1.60	14.00-42.00	0.14-0.19	0.0-2.9	0.5-5.0	.37	.37	5	5	56
	4-7	35-80	5-50	5-15	1.30-1.40	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.49	.49			
	7-20	20-80	5-50	20-35	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.24	.24			
	20-27	45-80	5-40	10-25	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	27-62	50-85	2-40	5-15	1.30-1.50	14.00-42.00	0.08-0.19	0.0-2.9	0.0-0.5	.15	.15			
21D:														
Edneytown	0-4	35-50	35-50	5-15	1.40-1.60	14.00-42.00	0.14-0.19	0.0-2.9	0.5-5.0	.37	.37	5	5	56
	4-7	35-80	5-50	5-15	1.30-1.40	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.49	.49			
	7-20	20-80	5-50	20-35	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.24	.24			
	20-27	45-80	5-40	10-25	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	27-62	50-85	2-40	5-15	1.30-1.50	14.00-42.00	0.08-0.19	0.0-2.9	0.0-0.5	.15	.15			
21E:														
Edneytown	0-4	35-50	35-50	5-15	1.40-1.60	14.00-42.00	0.14-0.19	0.0-2.9	0.5-5.0	.37	.37	5	5	56
	4-7	35-80	5-50	5-15	1.30-1.40	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.49	.49			
	7-20	20-80	5-50	20-35	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.24	.24			
	20-27	45-80	5-40	10-25	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	27-62	50-85	2-40	5-15	1.30-1.50	14.00-42.00	0.08-0.19	0.0-2.9	0.0-0.5	.15	.15			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
21F:														
Edneytown------------	0-4	35-50	35-50	5-15	1.40-1.60	14.00-42.00	0.14-0.19	0.0-2.9	0.5-5.0	.37	.37	5	5	56
	4-7	35-80	5-50	5-15	1.30-1.40	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.49	.49			
	7-20	20-80	5-50	20-35	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.24	.24			
	20-27	45-80	5-40	10-25	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	27-62	50-85	2-40	5-15	1.30-1.50	14.00-42.00	0.08-0.19	0.0-2.9	0.0-0.5	.15	.15			
22C:														
Edneytown------------	0-4	35-50	35-50	5-15	1.40-1.60	14.00-42.00	0.14-0.19	0.0-2.9	0.5-5.0	.37	.37	5	5	56
	4-7	35-80	5-50	5-15	1.30-1.40	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.49	.49			
	7-20	20-80	5-50	20-35	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.24	.24			
	20-27	45-80	5-40	10-25	1.30-1.50	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	27-62	50-85	2-40	5-15	1.30-1.50	14.00-42.00	0.08-0.19	0.0-2.9	0.0-0.5	.15	.15			
Urban land.														
23C:														
Edneyville-----------	0-5	30-50	30-50	7-20	1.40-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-6.0	.24	.24	5	5	56
	5-11	30-75	10-50	5-20	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.5-2.0	.37	.37			
	11-34	30-75	10-50	5-18	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.2-1.0	.24	.24			
	34-62	30-85	10-50	5-18	1.40-1.60	14.00-42.00	0.06-0.19	0.0-2.9	0.0-0.2	.20	.24			
23D:														
Edneyville-----------	0-5	30-50	30-50	7-20	1.40-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-6.0	.24	.24	5	5	56
	5-11	30-75	10-50	5-20	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.5-2.0	.37	.37			
	11-34	30-75	10-50	5-18	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.2-1.0	.24	.24			
	34-62	30-85	10-50	5-18	1.40-1.60	14.00-42.00	0.06-0.19	0.0-2.9	0.0-0.2	.20	.24			
23E:														
Edneyville-----------	0-5	30-50	30-50	7-20	1.40-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-6.0	.24	.24	5	5	56
	5-11	30-75	10-50	5-20	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.5-2.0	.37	.37			
	11-34	30-75	10-50	5-18	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.2-1.0	.24	.24			
	34-62	30-85	10-50	5-18	1.40-1.60	14.00-42.00	0.06-0.19	0.0-2.9	0.0-0.2	.20	.24			
24D:														
Edneyville-----------	0-5	30-50	30-50	7-20	1.40-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-6.0	.24	.24	5	5	56
	5-11	30-75	10-50	5-20	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.5-2.0	.37	.37			
	11-34	30-75	10-50	5-18	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.2-1.0	.24	.24			
	34-62	30-85	10-50	5-18	1.40-1.60	14.00-42.00	0.06-0.19	0.0-2.9	0.0-0.2	.20	.24			
24E:														
Edneyville-----------	0-5	30-50	30-50	7-20	1.40-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-6.0	.24	.24	5	5	56
	5-11	30-75	10-50	5-20	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.5-2.0	.37	.37			
	11-34	30-75	10-50	5-18	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.2-1.0	.24	.24			
	34-62	30-85	10-50	5-18	1.40-1.60	14.00-42.00	0.06-0.19	0.0-2.9	0.0-0.2	.20	.24			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
24F:														
Edneyville----------	0-5	30-50	30-50	7-20	1.40-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-6.0	.24	.24	5	5	56
	5-11	30-75	10-50	5-20	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.5-2.0	.37	.37			
	11-34	30-75	10-50	5-18	1.40-1.60	14.00-42.00	0.07-0.19	0.0-2.9	0.2-1.0	.24	.24			
	34-62	30-85	10-50	5-18	1.40-1.60	14.00-42.00	0.06-0.19	0.0-2.9	0.0-0.2	.20	.24			
25B:														
Elsinboro-----------	0-10	55-75	10-40	8-18	1.25-1.40	4.00-14.00	0.13-0.18	0.0-2.9	1.0-3.0	.20	.20	5	5	56
	10-18	15-75	10-75	8-18	1.25-1.40	4.00-14.00	0.09-0.22	0.0-2.9	0.2-0.8	.28	.28			
	18-45	10-75	10-65	18-34	1.30-1.50	4.00-14.00	0.09-0.22	0.0-2.9	0.0-0.5	.32	.32			
	45-62	15-75	10-75	8-34	1.35-1.55	4.00-42.00	0.10-0.22	0.0-2.9	0.0-0.5	.15	.20			
26B:														
Elsinboro-----------	0-10	55-75	10-40	8-18	1.25-1.40	4.00-14.00	0.13-0.18	0.0-2.9	1.0-3.0	.20	.20	5	5	56
	10-18	15-75	10-75	8-18	1.25-1.40	4.00-14.00	0.09-0.22	0.0-2.9	0.2-0.8	.28	.28			
	18-45	10-75	10-65	18-34	1.30-1.50	4.00-14.00	0.09-0.22	0.0-2.9	0.0-0.5	.32	.32			
	45-62	15-75	10-75	8-34	1.35-1.55	4.00-42.00	0.10-0.22	0.0-2.9	0.0-0.5	.15	.20			
Urban land.														
27D:														
Evard---------------	0-8	30-75	10-45	10-25	1.20-1.50	14.00-42.00	0.10-0.20	0.0-2.9	1.0-8.0	.15	.24	5	3	86
	8-35	25-70	10-50	18-35	1.30-1.50	4.00-14.00	0.14-0.17	0.0-2.9	0.2-1.0	.24	.28			
	35-79	35-95	5-45	5-22	1.30-1.60	4.00-42.00	0.08-0.17	0.0-2.9	0.1-1.0	.24	.32			
Cowee---------------	0-6	35-50	30-50	8-20	1.25-1.60	14.00-42.00	0.11-0.21	0.0-2.9	1.0-5.0	.15	.28	3	5	48
	6-27	25-65	10-50	18-35	1.30-1.60	4.00-14.00	0.07-0.19	0.0-2.9	0.5-1.0	.15	.28			
	27-39	35-70	10-50	10-25	1.30-1.60	4.00-14.00	0.08-0.19	0.0-2.9	0.0-0.8	.10	.24			
	39-45	---	---	---	---	0.01-1.40	---	---	---	---	---			
28B:														
Glenelg-------------	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.13-0.21	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			
28C:														
Glenelg-------------	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.13-0.21	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			
28D:														
Glenelg-------------	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.13-0.21	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
28E:														
Glenelg	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.13-0.21	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			
28F:														
Glenelg	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.13-0.21	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			
29C:														
Glenelg	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.09-0.16	0.0-2.9	1.0-3.0	.15	.28	5	6	38
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			
29D:														
Glenelg	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.09-0.16	0.0-2.9	1.0-3.0	.15	.28	5	6	38
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			
29E:														
Glenelg	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.09-0.16	0.0-2.9	1.0-3.0	.15	.28	5	6	38
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			
30C:														
Glenelg	0-4	30-50	30-50	15-25	1.10-1.40	4.00-14.00	0.13-0.21	0.0-2.9	1.0-3.0	.28	.28	5	6	48
	4-24	10-45	25-65	20-32	1.20-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.32	.32			
	24-62	20-80	5-70	5-20	1.20-1.40	4.00-14.00	0.06-0.20	0.0-2.9	0.0-0.5	.24	.28			
Urban land.														
31D:														
Greenlee	0-7	25-50	30-50	8-25	1.30-1.50	14.00-42.00	0.11-0.14	0.0-2.9	0.5-5.0	.10	.28	5	5	38
	7-53	25-80	5-50	3-25	1.40-1.60	14.00-42.00	0.07-0.15	0.0-2.9	1.0-2.0	.05	.24			
	53-62	35-90	5-50	1-18	1.40-1.60	14.00-42.00	0.03-0.15	0.0-2.9	0.0-0.5	.05	.28			
31E:														
Greenlee	0-7	25-50	30-50	8-25	1.30-1.50	14.00-42.00	0.11-0.14	0.0-2.9	0.5-5.0	.10	.28	5	5	38
	7-53	25-80	5-50	3-25	1.40-1.60	14.00-42.00	0.07-0.15	0.0-2.9	1.0-2.0	.05	.24			
	53-62	35-90	5-50	1-18	1.40-1.60	14.00-42.00	0.03-0.15	0.0-2.9	0.0-0.5	.05	.28			
32A:														
Hatboro	0-8	55-80	5-40	7-18	1.20-1.40	4.00-14.00	0.10-0.15	0.0-2.9	2.0-6.0	.15	.15	5	3	86
	8-45	10-65	10-65	15-35	1.20-1.40	4.00-14.00	0.10-0.22	0.0-2.9	0.0-0.5	.20	.20			
	45-62	5-95	5-90	5-45	1.20-1.50	4.00-14.00	0.01-0.22	0.0-2.9	0.0-0.5	.43	.43			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
33B:														
Hayesville-----------	0-6	30-50	30-50	7-20	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	0.5-1.0	.32	.32	5	5	56
	6-11	30-70	15-50	5-20	1.20-1.35	14.00-42.00	0.10-0.19	0.0-2.9	0.0-0.5	.37	.37			
	11-43	20-45	10-40	35-50	1.20-1.35	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	43-49	25-60	10-50	20-40	1.30-1.40	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.28	.28			
	49-62	30-75	5-50	10-25	1.45-1.65	14.00-42.00	0.10-0.19	0.0-2.9	0.0-0.5	.20	.20			
33C:														
Hayesville-----------	0-6	30-50	30-50	7-20	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	0.5-1.0	.32	.32	5	5	56
	6-11	30-70	15-50	5-20	1.20-1.35	14.00-42.00	0.10-0.19	0.0-2.9	0.0-0.5	.37	.37			
	11-43	20-45	10-40	35-50	1.20-1.35	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	43-49	25-60	10-50	20-40	1.30-1.40	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.28	.28			
	49-62	30-75	5-50	10-25	1.45-1.65	14.00-42.00	0.10-0.19	0.0-2.9	0.0-0.5	.20	.20			
33D:														
Hayesville-----------	0-6	30-50	30-50	7-20	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	0.5-1.0	.32	.32	5	5	56
	6-11	30-70	15-50	5-20	1.20-1.35	14.00-42.00	0.10-0.19	0.0-2.9	0.0-0.5	.37	.37			
	11-43	20-45	10-40	35-50	1.20-1.35	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.20	.20			
	43-49	25-60	10-50	20-40	1.30-1.40	4.00-14.00	0.10-0.13	0.0-2.9	0.0-0.5	.28	.28			
	49-62	30-75	5-50	10-25	1.45-1.65	14.00-42.00	0.10-0.19	0.0-2.9	0.0-0.5	.20	.20			
34B:														
Keener---------------	0-5	30-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.21	0.0-2.9	2.0-8.0	.24	.24	5	5	56
	5-14	30-70	15-50	5-25	1.35-1.60	14.00-42.00	0.10-0.19	0.0-2.9	1.0-2.0	.37	.37			
	14-54	25-60	10-45	18-35	1.30-1.45	4.00-14.00	0.09-0.19	0.0-2.9	0.2-1.0	.28	.32			
	54-62	25-70	5-45	10-35	1.30-1.45	4.00-42.00	0.06-0.16	0.0-2.9	0.1-0.5	.17	.24			
34C:														
Keener---------------	0-5	30-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.21	0.0-2.9	2.0-8.0	.24	.24	5	5	56
	5-14	30-70	15-50	5-25	1.35-1.60	14.00-42.00	0.10-0.19	0.0-2.9	1.0-2.0	.37	.37			
	14-54	25-60	10-45	18-35	1.30-1.45	4.00-14.00	0.09-0.19	0.0-2.9	0.2-1.0	.28	.32			
	54-62	25-70	5-45	10-35	1.30-1.45	4.00-42.00	0.06-0.16	0.0-2.9	0.1-0.5	.17	.24			
34D:														
Keener---------------	0-5	30-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.21	0.0-2.9	2.0-8.0	.24	.24	5	5	56
	5-14	30-70	15-50	5-25	1.35-1.60	14.00-42.00	0.10-0.19	0.0-2.9	1.0-2.0	.37	.37			
	14-54	25-60	10-45	18-35	1.30-1.45	4.00-14.00	0.09-0.19	0.0-2.9	0.2-1.0	.28	.32			
	54-62	25-70	5-45	10-35	1.30-1.45	4.00-42.00	0.06-0.16	0.0-2.9	0.1-0.5	.17	.24			
35C:														
Keener---------------	0-5	30-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.21	0.0-2.9	2.0-8.0	.24	.24	5	5	56
	5-14	30-70	15-50	5-25	1.35-1.60	14.00-42.00	0.10-0.19	0.0-2.9	1.0-2.0	.37	.37			
	14-54	25-60	10-45	18-35	1.30-1.45	4.00-14.00	0.09-0.19	0.0-2.9	0.2-1.0	.28	.32			
	54-62	25-70	5-45	10-35	1.30-1.45	4.00-42.00	0.06-0.16	0.0-2.9	0.1-0.5	.17	.24			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
35D:														
Keener---------------	0-5	30-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.21	0.0-2.9	2.0-8.0	.24	.24	5	5	56
	5-14	30-70	15-50	5-25	1.35-1.60	14.00-42.00	0.10-0.19	0.0-2.9	1.0-2.0	.37	.37			
	14-54	25-60	10-45	18-35	1.30-1.45	4.00-14.00	0.09-0.19	0.0-2.9	0.2-1.0	.28	.32			
	54-62	25-70	5-45	10-35	1.30-1.45	4.00-42.00	0.06-0.16	0.0-2.9	0.1-0.5	.17	.24			
36A:														
Kinkora--------------	0-7	55-75	10-35	10-20	1.25-1.55	1.40-14.00	0.12-0.18	0.0-2.9	1.0-5.0	.20	.20	5	3	86
	7-16	20-75	10-65	10-20	1.25-1.55	1.40-14.00	0.12-0.22	0.0-2.9	0.5-3.0	.28	.28			
	16-38	10-45	10-55	35-55	1.20-1.50	0.42-1.40	0.09-0.15	6.0-8.9	0.0-0.5	.28	.28			
	38-48	20-50	30-65	15-27	1.25-1.50	4.00-14.00	0.07-0.22	0.0-2.9	0.0-0.5	.28	.43			
	48-62	55-85	2-35	10-20	1.25-1.50	4.00-42.00	0.04-0.13	0.0-2.9	0.0-0.5	.10	.20			
37C:														
Konnarock------------	0-4	10-35	50-80	10-25	1.20-1.40	14.00-42.00	0.12-0.18	0.0-2.9	0.5-2.0	.24	.43	2	5	48
	4-19	10-50	30-75	15-25	1.20-1.60	14.00-42.00	0.03-0.19	0.0-2.9	0.5-1.0	.17	.43			
	19-23	10-50	30-75	15-25	1.20-1.60	14.00-42.00	0.02-0.13	0.0-2.9	0.0-0.5	.10	.49			
	23-33	---	---	---	---	0.00-0.42	---	---	---	---	---			
37D:														
Konnarock------------	0-4	10-35	50-80	10-25	1.20-1.40	14.00-42.00	0.12-0.18	0.0-2.9	0.5-2.0	.24	.43	2	5	48
	4-19	10-50	30-75	15-25	1.20-1.60	14.00-42.00	0.03-0.19	0.0-2.9	0.5-1.0	.17	.43			
	19-23	10-50	30-75	15-25	1.20-1.60	14.00-42.00	0.02-0.13	0.0-2.9	0.0-0.5	.10	.49			
	23-33	---	---	---	---	0.00-0.42	---	---	---	---	---			
37E:														
Konnarock------------	0-4	10-35	50-80	10-25	1.20-1.40	14.00-42.00	0.12-0.18	0.0-2.9	0.5-2.0	.24	.43	2	5	48
	4-19	10-50	30-75	15-25	1.20-1.60	14.00-42.00	0.03-0.19	0.0-2.9	0.5-1.0	.17	.43			
	19-23	10-50	30-75	15-25	1.20-1.60	14.00-42.00	0.02-0.13	0.0-2.9	0.0-0.5	.10	.49			
	23-33	---	---	---	---	0.00-0.42	---	---	---	---	---			
38C:														
McCamy---------------	0-5	55-75	10-35	7-20	1.20-1.40	4.00-42.00	0.13-0.16	0.0-2.9	0.5-4.0	.24	.24	2	3	86
	5-9	30-75	10-50	7-27	1.20-1.40	4.00-42.00	0.07-0.19	0.0-2.9	0.1-1.0	.32	.32			
	9-23	25-75	10-50	18-35	1.25-1.35	14.00-42.00	0.07-0.19	0.0-2.9	0.0-0.5	.24	.28			
	23-26	25-85	5-45	5-45	1.25-1.35	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.32			
	26-31	---	---	---	---	0.01-4.00	---	---	---	---	---			
	31-41	---	---	---	---	0.00-1.40	---	---	---	---	---			
38D:														
McCamy---------------	0-5	55-75	10-35	7-20	1.20-1.40	4.00-42.00	0.13-0.16	0.0-2.9	0.5-4.0	.24	.24	2	3	86
	5-9	30-75	10-50	7-27	1.20-1.40	4.00-42.00	0.07-0.19	0.0-2.9	0.1-1.0	.32	.32			
	9-23	25-75	10-50	18-35	1.25-1.35	14.00-42.00	0.07-0.19	0.0-2.9	0.0-0.5	.24	.28			
	23-26	25-85	5-45	5-45	1.25-1.35	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.32			
	26-31	---	---	---	---	0.01-4.00	---	---	---	---	---			
	31-41	---	---	---	---	0.00-1.40	---	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi-bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi-bility group	Wind erodi-bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
39D:														
McCamy---------------	0-5	55-75	10-35	7-20	1.20-1.40	4.00-42.00	0.13-0.16	0.0-2.9	0.5-4.0	.24	.24	2	3	86
	5-9	30-75	10-50	7-27	1.20-1.40	4.00-42.00	0.07-0.19	0.0-2.9	0.1-1.0	.32	.32			
	9-23	25-75	10-50	18-35	1.25-1.35	14.00-42.00	0.07-0.19	0.0-2.9	0.0-0.5	.24	.28			
	23-26	25-85	5-45	5-45	1.25-1.35	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.32			
	26-31	---	---	---	---	0.01-4.00	---	---	---	---	---			
	31-41	---	---	---	---	0.00-1.40	---	---	---	---	---			
39E:														
McCamy---------------	0-5	55-75	10-35	7-20	1.20-1.40	4.00-42.00	0.13-0.16	0.0-2.9	0.5-4.0	.24	.24	2	3	86
	5-9	30-75	10-50	7-27	1.20-1.40	4.00-42.00	0.07-0.19	0.0-2.9	0.1-1.0	.32	.32			
	9-23	25-75	10-50	18-35	1.25-1.35	14.00-42.00	0.07-0.19	0.0-2.9	0.0-0.5	.24	.28			
	23-26	25-85	5-45	5-45	1.25-1.35	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.20	.32			
	26-31	---	---	---	---	0.01-4.00	---	---	---	---	---			
	31-41	---	---	---	---	0.00-1.40	---	---	---	---	---			
40D:														
Mt Rogers------------	0-16	30-50	30-50	7-25	0.50-1.00	14.00-42.00	0.10-0.14	0.0-2.9	8.0-20	.10	.20	4	5	48
	16-33	20-75	5-75	5-25	1.00-1.50	14.00-42.00	0.01-0.15	0.0-2.9	0.5-5.0	.10	.28			
	33-62	20-75	5-75	5-25	1.20-1.60	14.00-42.00	0.02-0.13	0.0-2.9	0.5-1.0	.05	.17			
Bloodyhorse----------	0-12	30-50	30-50	7-25	0.50-1.00	14.00-42.00	0.09-0.13	0.0-2.9	8.0-20	.17	.28	2	5	48
	12-28	20-75	5-75	5-25	1.00-1.50	14.00-42.00	0.01-0.13	0.0-2.9	0.5-5.0	.15	.37			
	28-37	20-75	5-75	5-25	1.20-1.60	14.00-42.00	0.01-0.08	0.0-2.9	0.5-1.0	.10	.43			
	37-47	---	---	---	---	0.00-0.07	---	---	---	---	---			
Rock outcrop.														
40F:														
Mt Rogers------------	0-16	30-50	30-50	7-25	0.50-1.00	14.00-42.00	0.10-0.14	0.0-2.9	8.0-20	.10	.20	4	5	48
	16-33	20-75	5-75	5-25	1.00-1.50	14.00-42.00	0.01-0.15	0.0-2.9	0.5-5.0	.10	.28			
	33-62	20-75	5-75	5-25	1.20-1.60	14.00-42.00	0.02-0.13	0.0-2.9	0.5-1.0	.05	.17			
Bloodyhorse----------	0-12	30-50	30-50	7-25	0.50-1.00	14.00-42.00	0.09-0.13	0.0-2.9	8.0-20	.17	.28	2	5	48
	12-28	20-75	5-75	5-25	1.00-1.50	14.00-42.00	0.01-0.13	0.0-2.9	0.5-5.0	.15	.37			
	28-37	20-75	5-75	5-25	1.20-1.60	14.00-42.00	0.01-0.08	0.0-2.9	0.5-1.0	.10	.43			
	37-47	---	---	---	---	0.00-0.07	---	---	---	---	---			
Rock outcrop.														
41C:														
Mt Rogers------------	0-16	30-50	30-50	7-25	0.50-1.00	14.00-42.00	0.10-0.14	0.0-2.9	8.0-20	.10	.20	4	5	48
	16-33	20-75	5-75	5-25	1.00-1.50	14.00-42.00	0.01-0.15	0.0-2.9	0.5-5.0	.10	.28			
	33-62	20-75	5-75	5-25	1.20-1.60	14.00-42.00	0.02-0.13	0.0-2.9	0.5-1.0	.05	.17			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
41C:														
Buzzrock----------------	0-14	30-50	30-50	7-25	0.50-1.00	14.00-42.00	0.11-0.16	0.0-2.9	8.0-20	.17	.20	2	5	56
	14-20	20-75	5-75	5-25	1.00-1.50	14.00-42.00	0.04-0.15	0.0-2.9	0.5-5.0	.10	.28			
	20-42	20-75	5-75	5-25	1.20-1.60	141.00-705	0.00-0.03	0.0-2.9	0.5-1.0	.02	.49			
	42-52	---	---	---	---	0.00-0.07	---	---	---	---	---			
41D:														
Mt Rogers---------------	0-16	30-50	30-50	7-25	0.50-1.00	14.00-42.00	0.10-0.14	0.0-2.9	8.0-20	.10	.20	4	5	48
	16-33	20-75	5-75	5-25	1.00-1.50	14.00-42.00	0.01-0.15	0.0-2.9	0.5-5.0	.10	.28			
	33-62	20-75	5-75	5-25	1.20-1.60	14.00-42.00	0.02-0.13	0.0-2.9	0.5-1.0	.05	.17			
Buzzrock----------------	0-14	30-50	30-50	7-25	0.50-1.00	14.00-42.00	0.11-0.16	0.0-2.9	8.0-20	.17	.20	2	5	56
	14-20	20-75	5-75	5-25	1.00-1.50	14.00-42.00	0.04-0.15	0.0-2.9	0.5-5.0	.10	.28			
	20-42	20-75	5-75	5-25	1.20-1.60	141.00-705	0.00-0.03	0.0-2.9	0.5-1.0	.02	.49			
	42-52	---	---	---	---	0.00-0.07	---	---	---	---	---			
42C:														
Peaks-------------------	0-4	35-50	35-50	7-16	1.20-1.40	42.00-141.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.37	2	5	38
	4-8	35-70	15-50	4-16	1.20-1.40	42.00-141.00	0.03-0.14	0.0-2.9	0.0-0.5	.17	.49			
	8-23	30-70	15-50	5-18	1.20-1.40	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	23-32	35-85	5-50	5-18	1.20-1.40	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.5	.05	.28			
	32-42	---	---	---	---	0.00-0.42	---	---	---	---	---			
42D:														
Peaks-------------------	0-4	35-50	35-50	7-16	1.20-1.40	42.00-141.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.37	2	5	38
	4-8	35-70	15-50	4-16	1.20-1.40	42.00-141.00	0.03-0.14	0.0-2.9	0.0-0.5	.17	.49			
	8-23	30-70	15-50	5-18	1.20-1.40	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	23-32	35-85	5-50	5-18	1.20-1.40	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.5	.05	.28			
	32-42	---	---	---	---	0.00-0.42	---	---	---	---	---			
42E:														
Peaks-------------------	0-4	35-50	35-50	7-16	1.20-1.40	42.00-141.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.37	2	5	38
	4-8	35-70	15-50	4-16	1.20-1.40	42.00-141.00	0.03-0.14	0.0-2.9	0.0-0.5	.17	.49			
	8-23	30-70	15-50	5-18	1.20-1.40	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	23-32	35-85	5-50	5-18	1.20-1.40	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.5	.05	.28			
	32-42	---	---	---	---	0.00-0.42	---	---	---	---	---			
43C:														
Peaks-------------------	0-4	35-50	35-50	7-16	1.20-1.40	42.00-141.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.37	2	5	38
	4-8	35-70	15-50	4-16	1.20-1.40	42.00-141.00	0.03-0.14	0.0-2.9	0.0-0.5	.17	.49			
	8-23	30-70	15-50	5-18	1.20-1.40	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	23-32	35-85	5-50	5-18	1.20-1.40	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.5	.05	.28			
	32-42	---	---	---	---	0.00-0.42	---	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
43D:														
Peaks----------------	0-4	35-50	35-50	7-16	1.20-1.40	42.00-141.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.37	2	5	38
	4-8	35-70	15-50	4-16	1.20-1.40	42.00-141.00	0.03-0.14	0.0-2.9	0.0-0.5	.17	.49			
	8-23	30-70	15-50	5-18	1.20-1.40	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	23-32	35-85	5-50	5-18	1.20-1.40	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.5	.05	.28			
	32-42	---	---	---	---	0.00-0.42	---	---	---	---	---			
43E:														
Peaks----------------	0-4	35-50	35-50	7-16	1.20-1.40	42.00-141.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.37	2	5	38
	4-8	35-70	15-50	4-16	1.20-1.40	42.00-141.00	0.03-0.14	0.0-2.9	0.0-0.5	.17	.49			
	8-23	30-70	15-50	5-18	1.20-1.40	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	23-32	35-85	5-50	5-18	1.20-1.40	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.5	.05	.28			
	32-42	---	---	---	---	0.00-0.42	---	---	---	---	---			
43F:														
Peaks----------------	0-4	35-50	35-50	7-16	1.20-1.40	42.00-141.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.37	2	5	38
	4-8	35-70	15-50	4-16	1.20-1.40	42.00-141.00	0.03-0.14	0.0-2.9	0.0-0.5	.17	.49			
	8-23	30-70	15-50	5-18	1.20-1.40	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	23-32	35-85	5-50	5-18	1.20-1.40	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.5	.05	.28			
	32-42	---	---	---	---	0.00-0.42	---	---	---	---	---			
44C:														
Pigeonroost----------	0-5	30-50	30-50	8-20	1.35-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-5.0	.32	.32	3	5	56
	5-24	10-65	10-60	18-35	1.30-1.50	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.37	.37			
	24-37	30-75	5-45	8-25	1.35-1.60	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.49	.49			
	37-72	---	---	---	---	0.00-0.42	---	---	---	---	---			
44D:														
Pigeonroost----------	0-5	30-50	30-50	8-20	1.35-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-5.0	.32	.32	3	5	56
	5-24	10-65	10-60	18-35	1.30-1.50	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.37	.37			
	24-37	30-75	5-45	8-25	1.35-1.60	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.49	.49			
	37-72	---	---	---	---	0.00-0.42	---	---	---	---	---			
44E:														
Pigeonroost----------	0-5	30-50	30-50	8-20	1.35-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-5.0	.32	.32	3	5	56
	5-24	10-65	10-60	18-35	1.30-1.50	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.37	.37			
	24-37	30-75	5-45	8-25	1.35-1.60	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.49	.49			
	37-72	---	---	---	---	0.00-0.42	---	---	---	---	---			
45D:														
Pigeonroost----------	0-5	30-50	30-50	8-20	1.35-1.60	14.00-42.00	0.11-0.16	0.0-2.9	1.0-5.0	.17	.32	3	5	56
	5-24	10-65	10-60	18-35	1.30-1.50	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.37	.37			
	24-37	30-75	5-45	8-25	1.35-1.60	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.49	.49			
	37-72	---	---	---	---	0.00-0.42	---	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
45E:														
Pigeonroost----------	0-5	30-50	30-50	8-20	1.35-1.60	14.00-42.00	0.11-0.16	0.0-2.9	1.0-5.0	.17	.32	3	5	56
	5-24	10-65	10-60	18-35	1.30-1.50	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.37	.37			
	24-37	30-75	5-45	8-25	1.35-1.60	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.49	.49			
	37-72	---	---	---	---	0.00-0.42	---	---	---	---	---			
46E:														
Pigeonroost----------	0-5	30-50	30-50	8-20	1.35-1.60	14.00-42.00	0.15-0.21	0.0-2.9	1.0-5.0	.32	.32	3	5	56
	5-24	10-65	10-60	18-35	1.30-1.50	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.37	.37			
	24-37	30-75	5-45	8-25	1.35-1.60	4.00-14.00	0.10-0.19	0.0-2.9	0.0-0.5	.49	.49			
	37-72	---	---	---	---	0.00-0.42	---	---	---	---	---			
Rock outcrop.														
47D:														
Pineola--------------	0-10	30-50	30-50	8-20	1.30-1.60	14.00-42.00	0.14-0.21	0.0-2.9	3.0-8.0	.24	.24	3	5	56
	10-15	20-65	15-70	8-20	1.30-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.5-1.0	.43	.43			
	15-26	10-65	10-60	18-35	1.20-1.60	4.00-14.00	0.07-0.19	0.0-2.9	0.0-0.5	.28	.37			
	26-29	20-75	10-70	5-18	1.30-1.60	4.00-14.00	0.05-0.22	0.0-2.9	0.0-0.5	.17	.32			
	29-72	---	---	---	---	0.00-14.00	---	---	---	---	---			
48E:														
Pineola--------------	0-10	30-50	30-50	8-20	1.30-1.60	14.00-42.00	0.14-0.21	0.0-2.9	3.0-8.0	.24	.24	3	5	56
	10-15	20-65	15-70	8-20	1.30-1.60	4.00-14.00	0.07-0.22	0.0-2.9	0.5-1.0	.43	.43			
	15-26	10-65	10-60	18-35	1.20-1.60	4.00-14.00	0.07-0.19	0.0-2.9	0.0-0.5	.28	.37			
	26-29	20-75	10-70	5-18	1.30-1.60	4.00-14.00	0.05-0.22	0.0-2.9	0.0-0.5	.17	.32			
	29-72	---	---	---	---	0.00-14.00	---	---	---	---	---			
49.														
Pits, quarries														
50F:														
Rock outcrop.														
Peaks----------------	0-4	35-50	35-50	7-16	1.20-1.40	42.00-141.00	0.05-0.10	0.0-2.9	1.0-4.0	.15	.37	2	5	38
	4-8	35-70	15-50	4-16	1.20-1.40	42.00-141.00	0.03-0.14	0.0-2.9	0.0-0.5	.17	.49			
	8-23	30-70	15-50	5-18	1.20-1.40	42.00-141.00	0.03-0.10	0.0-2.9	0.0-0.5	.15	.49			
	23-32	35-85	5-50	5-18	1.20-1.40	42.00-141.00	0.01-0.10	0.0-2.9	0.0-0.5	.05	.28			
	32-42	---	---	---	---	0.00-0.42	---	---	---	---	---			
51B:														
Scales---------------	0-2	---	---	---	0.05-0.20	14.00-42.00	0.30-0.40	---	30-90	---	---	1	7	38
	2-11	---	---	---	0.10-0.35	14.00-42.00	0.30-0.40	---	30-90	---	---			
	11-21	25-85	5-50	5-35	1.35-1.75	1.40-14.00	0.06-0.20	0.0-2.9	0.5-5.0	.10	.20			
	21-33	25-75	5-50	18-35	1.80-2.00	0.42-1.40	0.03-0.06	0.0-2.9	0.5-1.0	.24	.32			
	33-62	25-75	5-50	18-35	1.80-2.00	0.42-1.40	0.03-0.06	0.0-2.9	0.5-1.0	.20	.32			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors			Wind erodi- bility group	Wind erodi- bility index
										Kw	Kf	T		
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
52C:														
Sylco----------------	0-4	5-40	50-80	10-25	1.00-1.20	14.00-42.00	0.11-0.18	0.0-2.9	0.5-2.0	.28	.43	2	5	48
	4-22	5-50	30-80	10-30	1.20-1.50	14.00-42.00	0.07-0.18	0.0-2.9	0.2-1.5	.17	.49			
	22-27	5-50	30-80	10-30	1.20-1.50	14.00-42.00	0.04-0.12	0.0-2.9	0.1-1.0	.10	.49			
	27-37	---	---	---	---	0.00-0.42	---	---	---	---	---			
Sylvatus-------------	0-2	5-40	50-80	10-25	1.00-1.20	4.00-14.00	0.11-0.18	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	2-11	5-50	30-80	10-30	1.20-1.50	4.00-14.00	0.03-0.18	0.0-2.9	0.1-1.0	.15	.49			
	11-16	5-50	30-80	10-35	1.20-1.40	4.00-14.00	0.01-0.10	0.0-2.9	0.0-0.5	.10	.49			
	16-26	---	---	---	---	0.00-0.42	---	---	---	---	---			
52D:														
Sylco----------------	0-4	5-40	50-80	10-25	1.00-1.20	14.00-42.00	0.11-0.18	0.0-2.9	0.5-2.0	.28	.43	2	5	48
	4-22	5-50	30-80	10-30	1.20-1.50	14.00-42.00	0.07-0.18	0.0-2.9	0.2-1.5	.17	.49			
	22-27	5-50	30-80	10-30	1.20-1.50	14.00-42.00	0.04-0.12	0.0-2.9	0.1-1.0	.10	.49			
	27-37	---	---	---	---	0.00-0.42	---	---	---	---	---			
Sylvatus-------------	0-2	5-40	50-80	10-25	1.00-1.20	4.00-14.00	0.11-0.18	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	2-11	5-50	30-80	10-30	1.20-1.50	4.00-14.00	0.03-0.18	0.0-2.9	0.1-1.0	.15	.49			
	11-16	5-50	30-80	10-35	1.20-1.40	4.00-14.00	0.01-0.10	0.0-2.9	0.0-0.5	.10	.49			
	16-26	---	---	---	---	0.00-0.42	---	---	---	---	---			
52E:														
Sylco----------------	0-4	5-40	50-80	10-25	1.00-1.20	14.00-42.00	0.11-0.18	0.0-2.9	0.5-2.0	.28	.43	2	5	48
	4-22	5-50	30-80	10-30	1.20-1.50	14.00-42.00	0.07-0.18	0.0-2.9	0.2-1.5	.17	.49			
	22-27	5-50	30-80	10-30	1.20-1.50	14.00-42.00	0.04-0.12	0.0-2.9	0.1-1.0	.10	.49			
	27-37	---	---	---	---	0.00-0.42	---	---	---	---	---			
Sylvatus-------------	0-2	5-40	50-80	10-25	1.00-1.20	4.00-14.00	0.11-0.18	0.0-2.9	0.5-2.0	.28	.43	1	5	48
	2-11	5-50	30-80	10-30	1.20-1.50	4.00-14.00	0.03-0.18	0.0-2.9	0.1-1.0	.15	.49			
	11-16	5-50	30-80	10-35	1.20-1.40	4.00-14.00	0.01-0.10	0.0-2.9	0.0-0.5	.10	.49			
	16-26	---	---	---	---	0.00-0.42	---	---	---	---	---			
53B:														
Tate-----------------	0-6	25-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	1.0-5.0	.28	.28	5	5	56
	6-12	20-70	10-50	10-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.20	.20			
	12-27	20-60	10-50	18-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.28	.28			
	27-47	25-70	10-50	12-35	1.30-1.45	4.00-14.00	0.05-0.18	0.0-2.9	0.0-0.5	.20	.20			
	47-62	35-85	5-50	5-25	1.35-1.60	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.24	.28			
53C:														
Tate-----------------	0-6	25-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	1.0-5.0	.28	.28	5	5	56
	6-12	20-70	10-50	10-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.20	.20			
	12-27	20-60	10-50	18-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.28	.28			
	27-47	25-70	10-50	12-35	1.30-1.45	4.00-14.00	0.05-0.18	0.0-2.9	0.0-0.5	.20	.20			
	47-62	35-85	5-50	5-25	1.35-1.60	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.24	.28			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensibility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodibility group	Wind erodibility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
53D:														
Tate-----------------	0-6	25-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	1.0-5.0	.28	.28	5	5	56
	6-12	20-70	10-50	10-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.20	.20			
	12-27	20-60	10-50	18-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.28	.28			
	27-47	25-70	10-50	12-35	1.30-1.45	4.00-14.00	0.05-0.18	0.0-2.9	0.0-0.5	.20	.20			
	47-62	35-85	5-50	5-25	1.35-1.60	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.24	.28			
53E:														
Tate-----------------	0-6	25-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	1.0-5.0	.28	.28	5	5	56
	6-12	20-70	10-50	10-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.20	.20			
	12-27	20-60	10-50	18-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.28	.28			
	27-47	25-70	10-50	12-35	1.30-1.45	4.00-14.00	0.05-0.18	0.0-2.9	0.0-0.5	.20	.20			
	47-62	35-85	5-50	5-25	1.35-1.60	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.24	.28			
54C:														
Tate-----------------	0-6	25-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	1.0-5.0	.28	.28	5	5	56
	6-12	20-70	10-50	10-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.20	.20			
	12-27	20-60	10-50	18-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.28	.28			
	27-47	25-70	10-50	12-35	1.30-1.45	4.00-14.00	0.05-0.18	0.0-2.9	0.0-0.5	.20	.20			
	47-62	35-85	5-50	5-25	1.35-1.60	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.24	.28			
54D:														
Tate-----------------	0-6	25-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	1.0-5.0	.28	.28	5	5	56
	6-12	20-70	10-50	10-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.20	.20			
	12-27	20-60	10-50	18-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.28	.28			
	27-47	25-70	10-50	12-35	1.30-1.45	4.00-14.00	0.05-0.18	0.0-2.9	0.0-0.5	.20	.20			
	47-62	35-85	5-50	5-25	1.35-1.60	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.24	.28			
54E:														
Tate-----------------	0-6	25-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	1.0-5.0	.28	.28	5	5	56
	6-12	20-70	10-50	10-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.20	.20			
	12-27	20-60	10-50	18-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.28	.28			
	27-47	25-70	10-50	12-35	1.30-1.45	4.00-14.00	0.05-0.18	0.0-2.9	0.0-0.5	.20	.20			
	47-62	35-85	5-50	5-25	1.35-1.60	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.24	.28			
55D:														
Tate-----------------	0-6	25-50	30-50	7-25	1.35-1.60	14.00-42.00	0.15-0.19	0.0-2.9	1.0-5.0	.28	.28	5	5	56
	6-12	20-70	10-50	10-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.20	.20			
	12-27	20-60	10-50	18-35	1.30-1.45	4.00-14.00	0.07-0.19	0.0-2.9	0.0-1.0	.28	.28			
	27-47	25-70	10-50	12-35	1.30-1.45	4.00-14.00	0.05-0.18	0.0-2.9	0.0-0.5	.20	.20			
	47-62	35-85	5-50	5-25	1.35-1.60	14.00-42.00	0.04-0.17	0.0-2.9	0.0-0.5	.24	.28			
56C:														
Thunder--------------	0-5	25-50	30-50	7-27	1.45-1.55	14.00-42.00	0.16-0.19	0.0-2.9	6.0-14	.10	.20	5	6	38
	5-12	25-50	30-50	7-27	1.45-1.55	14.00-42.00	0.13-0.19	0.0-2.9	5.0-12	.10	.24			
	12-21	25-70	10-50	7-27	1.45-1.55	14.00-42.00	0.03-0.17	0.0-2.9	0.0-0.5	.15	.37			
	21-50	25-65	10-45	15-40	1.45-1.55	4.00-14.00	0.03-0.15	0.0-2.9	0.0-0.5	.10	.20			
	50-62	25-70	10-45	5-35	1.45-1.55	14.00-42.00	0.03-0.10	0.0-2.9	0.0-0.5	.05	.20			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Kf	T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
56D:														
Thunder--------------	0-5	25-50	30-50	7-27	1.45-1.55	14.00-42.00	0.16-0.19	0.0-2.9	6.0-14	.10	.20	5	6	38
	5-12	25-50	30-50	7-27	1.45-1.55	14.00-42.00	0.13-0.19	0.0-2.9	5.0-12	.10	.24			
	12-21	25-70	10-50	7-27	1.45-1.55	14.00-42.00	0.03-0.17	0.0-2.9	0.0-0.5	.15	.37			
	21-50	25-65	10-45	15-40	1.45-1.55	4.00-14.00	0.03-0.15	0.0-2.9	0.0-0.5	.10	.20			
	50-62	25-70	10-45	5-35	1.45-1.55	14.00-42.00	0.03-0.10	0.0-2.9	0.0-0.5	.05	.20			
56E:														
Thunder--------------	0-5	25-50	30-50	7-27	1.45-1.55	14.00-42.00	0.16-0.19	0.0-2.9	6.0-14	.10	.20	5	6	38
	5-12	25-50	30-50	7-27	1.45-1.55	14.00-42.00	0.13-0.19	0.0-2.9	5.0-12	.10	.24			
	12-21	25-70	10-50	7-27	1.45-1.55	14.00-42.00	0.03-0.17	0.0-2.9	0.0-0.5	.15	.37			
	21-50	25-65	10-45	15-40	1.45-1.55	4.00-14.00	0.03-0.15	0.0-2.9	0.0-0.5	.10	.20			
	50-62	25-70	10-45	5-35	1.45-1.55	14.00-42.00	0.03-0.10	0.0-2.9	0.0-0.5	.05	.20			
57C:														
Thunder--------------	0-5	25-50	30-50	7-27	1.45-1.55	14.00-42.00	0.16-0.19	0.0-2.9	6.0-14	.10	.20	5	6	38
	5-12	25-50	30-50	7-27	1.45-1.55	14.00-42.00	0.13-0.19	0.0-2.9	5.0-12	.10	.24			
	12-21	25-70	10-50	7-27	1.45-1.55	14.00-42.00	0.03-0.17	0.0-2.9	0.0-0.5	.15	.37			
	21-50	25-65	10-45	15-40	1.45-1.55	4.00-14.00	0.03-0.15	0.0-2.9	0.0-0.5	.10	.20			
	50-62	25-70	10-45	5-35	1.45-1.55	14.00-42.00	0.03-0.10	0.0-2.9	0.0-0.5	.05	.20			
57D:														
Thunder--------------	0-5	25-50	30-50	7-27	1.45-1.55	14.00-42.00	0.16-0.19	0.0-2.9	6.0-14	.10	.20	5	6	38
	5-12	25-50	30-50	7-27	1.45-1.55	14.00-42.00	0.13-0.19	0.0-2.9	5.0-12	.10	.24			
	12-21	25-70	10-50	7-27	1.45-1.55	14.00-42.00	0.03-0.17	0.0-2.9	0.0-0.5	.15	.37			
	21-50	25-65	10-45	15-40	1.45-1.55	4.00-14.00	0.03-0.15	0.0-2.9	0.0-0.5	.10	.20			
	50-62	25-70	10-45	5-35	1.45-1.55	14.00-42.00	0.03-0.10	0.0-2.9	0.0-0.5	.05	.20			
57E:														
Thunder--------------	0-5	25-50	30-50	7-27	1.45-1.55	14.00-42.00	0.16-0.19	0.0-2.9	6.0-14	.10	.20	5	6	38
	5-12	25-50	30-50	7-27	1.45-1.55	14.00-42.00	0.13-0.19	0.0-2.9	5.0-12	.10	.24			
	12-21	25-70	10-50	7-27	1.45-1.55	14.00-42.00	0.03-0.17	0.0-2.9	0.0-0.5	.15	.37			
	21-50	25-65	10-45	15-40	1.45-1.55	4.00-14.00	0.03-0.15	0.0-2.9	0.0-0.5	.10	.20			
	50-62	25-70	10-45	5-35	1.45-1.55	14.00-42.00	0.03-0.10	0.0-2.9	0.0-0.5	.05	.20			
58D.														
Udorthents-Urban land														
59D:														
Unicoi---------------	0-5	55-80	5-40	5-20	1.45-1.55	14.00-42.00	0.04-0.07	0.0-2.9	0.5-2.0	.10	.24	1	3	48
	5-14	35-80	5-45	5-20	1.45-1.60	14.00-42.00	0.04-0.10	0.0-2.9	0.0-0.5	.10	.37			
	14-19	35-80	5-45	5-20	1.45-1.60	14.00-42.00	0.04-0.10	0.0-2.9	0.0-0.5	.10	.37			
	19-29	---	---	---	---	0.00-0.07	---	---	---	---	---			

Table 16.—Physical Soil Properties—Continued

Map symbol and soil name	Depth	Sand	Silt	Clay	Moist bulk density	Saturated hydraulic conductivity	Available water capacity	Linear extensi- bility	Organic matter	Erosion factors Kw	Erosion factors Kf	Erosion factors T	Wind erodi- bility group	Wind erodi- bility index
	In	Pct	Pct	Pct	g/cc	um/sec	In/in	Pct	Pct					
59E:														
Unicoi---------------	0-5	55-80	5-40	5-20	1.45-1.55	14.00-42.00	0.04-0.07	0.0-2.9	0.5-2.0	.10	.24	1	3	48
	5-14	35-80	5-45	5-20	1.45-1.60	14.00-42.00	0.04-0.10	0.0-2.9	0.0-0.5	.10	.37			
	14-19	35-80	5-45	5-20	1.45-1.60	14.00-42.00	0.04-0.10	0.0-2.9	0.0-0.5	.10	.37			
	19-29	---	---	---	---	0.00-0.07	---	---	---	---	---			
W.														
Water														

Table 17.—Chemical Soil Properties

(Absence of an entry indicates that data were not estimated)

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
1C:				
Balsam---------------	0-19	19-54	14-41	3.5-6.0
	19-35	3.2-21	2.4-16	3.5-6.0
	35-48	2.1-14	1.6-10	3.5-6.0
	48-62	1.6-7.5	1.2-5.6	3.5-6.0
1D:				
Balsam---------------	0-19	19-54	14-41	3.5-6.0
	19-35	3.2-21	2.4-16	3.5-6.0
	35-48	2.1-14	1.6-10	3.5-6.0
	48-62	1.6-7.5	1.2-5.6	3.5-6.0
1E:				
Balsam---------------	0-19	19-54	14-41	3.5-6.0
	19-35	3.2-21	2.4-16	3.5-6.0
	35-48	2.1-14	1.6-10	3.5-6.0
	48-62	1.6-7.5	1.2-5.6	3.5-6.0
2D:				
Balsam---------------	0-19	19-54	14-41	3.5-6.0
	19-35	3.2-21	2.4-16	3.5-6.0
	35-48	2.1-14	1.6-10	3.5-6.0
	48-62	1.6-7.5	1.2-5.6	3.5-6.0
Nopan----------------	0-6	24-61	18-46	3.5-5.5
	6-17	1.6-16	1.2-12	3.5-5.5
	17-33	1.6-16	1.2-12	3.5-5.5
	33-50	1.6-20	1.2-15	3.5-5.5
	50-62	1.6-6.8	1.2-5.1	3.5-5.5
2E:				
Balsam---------------	0-19	19-54	14-41	3.5-6.0
	19-35	3.2-21	2.4-16	3.5-6.0
	35-48	2.1-14	1.6-10	3.5-6.0
	48-62	1.6-7.5	1.2-5.6	3.5-6.0
Nopan----------------	0-6	24-61	18-46	3.5-5.5
	6-17	1.6-16	1.2-12	3.5-5.5
	17-33	1.6-16	1.2-12	3.5-5.5
	33-50	1.6-20	1.2-15	3.5-5.5
	50-62	1.6-6.8	1.2-5.1	3.5-5.5
3D:				
Bloodyhorse----------	0-12	20-51	15-38	3.5-6.0
	12-28	2.4-18	1.8-13	3.5-6.0
	28-37	2.4-8.5	1.8-6.4	3.5-6.0
	37-47	---	---	---
4F:				
Bloodyhorse----------	0-12	20-51	15-38	3.5-6.0
	12-28	2.4-18	1.8-13	3.5-6.0
	28-37	2.4-8.5	1.8-6.4	3.5-6.0
	37-47	---	---	---

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
5B:				
Braddock-------------	0-8	4.8-11	3.6-8.1	3.5-6.5
	8-15	7.9-15	5.9-11	3.5-6.0
	15-51	8.8-15	6.6-11	3.5-5.5
	51-62	8.8-14	6.6-10	3.5-5.5
5C:				
Braddock-------------	0-8	4.8-11	3.6-8.1	3.5-6.5
	8-15	7.9-15	5.9-11	3.5-6.0
	15-51	8.8-15	6.6-11	3.5-5.5
	51-62	8.8-14	6.6-10	3.5-5.5
5D:				
Braddock-------------	0-8	4.8-11	3.6-8.1	3.5-6.5
	8-15	7.9-15	5.9-11	3.5-6.0
	15-51	8.8-15	6.6-11	3.5-5.5
	51-62	8.8-14	6.6-10	3.5-5.5
6E:				
Braddock-------------	0-8	4.8-11	3.6-8.1	3.5-6.5
	8-15	7.9-15	5.9-11	3.5-6.0
	15-51	8.8-15	6.6-11	3.5-5.5
	51-62	8.8-14	6.6-10	3.5-5.5
7D:				
Brevard--------------	0-8	3.5-12	2.6-8.8	4.5-6.0
	8-48	5.0-9.9	3.8-7.4	4.5-6.0
	48-60	2.0-7.4	1.5-5.5	4.5-6.0
Greenlee-------------	0-7	3.0-15	2.0-11	3.6-6.0
	7-53	3.0-11	2.0-8.0	3.6-6.0
	53-62	1.0-6.0	1.0-4.0	3.6-6.0
8C:				
Burton---------------	0-13	22-53	16-40	3.5-6.0
	13-21	6.4-20	4.8-15	3.5-6.0
	21-26	1.8-11	1.3-8.2	3.5-6.0
	26-31	---	---	---
	31-42	---	---	---
9D:				
Burton---------------	0-13	22-53	16-40	3.5-6.0
	13-21	6.4-20	4.8-15	3.5-6.0
	21-26	1.8-11	1.3-8.2	3.5-6.0
	26-31	---	---	---
	31-42	---	---	---
9E:				
Burton---------------	0-13	22-53	16-40	3.5-6.0
	13-21	6.4-20	4.8-15	3.5-6.0
	21-26	1.8-11	1.3-8.2	3.5-6.0
	26-31	---	---	---
	31-42	---	---	---
10D:				
Peaks----------------	0-4	4.0-13	3.0-9.8	4.5-6.0
	4-8	1.0-5.1	0.8-3.8	4.5-6.0
	8-23	1.2-5.6	0.9-4.2	4.5-6.0
	23-32	1.2-5.6	0.9-4.2	4.5-6.0
	32-42	---	---	---

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
10D:				
Chestnut-------------	0-3	3.5-23	2.6-17	3.5-6.0
	3-21	1.2-11	0.9-8.1	3.5-6.0
	21-29	1.2-11	0.9-8.1	3.5-6.0
	29-45	---	---	---
	45-80	---	---	---
10E:				
Chestnut-------------	0-3	3.5-23	2.6-17	3.5-6.0
	3-21	1.2-11	0.9-8.1	3.5-6.0
	21-29	1.2-11	0.9-8.1	3.5-6.0
	29-45	---	---	---
	45-80	---	---	---
Peaks----------------	0-4	4.0-13	3.0-9.8	4.5-6.0
	4-8	1.0-5.1	0.8-3.8	4.5-6.0
	8-23	1.2-5.6	0.9-4.2	4.5-6.0
	23-32	1.2-5.6	0.9-4.2	4.5-6.0
	32-42	---	---	---
11F:				
Chestnut-------------	0-3	3.5-23	2.6-17	3.5-6.0
	3-21	1.2-11	0.9-8.1	3.5-6.0
	21-29	1.2-11	0.9-8.1	3.5-6.0
	29-45	---	---	---
	45-80	---	---	---
Peaks----------------	0-4	4.0-13	3.0-9.8	4.5-6.0
	4-8	1.0-5.1	0.8-3.8	4.5-6.0
	8-23	1.2-5.6	0.9-4.2	4.5-6.0
	23-32	1.2-5.6	0.9-4.2	4.5-6.0
	32-42	---	---	---
Tuckasegee-----------	0-13	8.0-23	6.0-17	4.5-6.5
	13-47	2.9-11	2.2-8.4	4.5-6.0
	47-79	1.2-7.2	0.9-5.4	4.5-6.0
12A:				
Codorus--------------	0-7	10-18	7.0-13	4.5-6.0
	7-19	6.0-13	5.0-10	4.5-6.0
	19-37	6.0-13	5.0-10	5.1-6.5
	37-49	4.0-13	3.0-10	5.1-6.5
	49-62	4.0-13	3.0-10	5.1-6.5
13A:				
Comus----------------	0-9	3.5-14	2.6-10	4.5-6.0
	9-31	1.2-5.6	0.9-4.2	4.5-6.0
	31-53	1.2-5.6	0.9-4.2	4.5-6.0
	53-62	0.5-5.6	0.4-4.2	4.5-6.0
14C:				
Cowee----------------	0-6	4.2-16	3.2-12	3.5-6.0
	6-27	5.6-11	4.2-8.2	3.5-6.0
	27-39	2.5-8.1	1.9-6.0	3.5-6.0
	39-45	---	---	---

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
14D:				
Cowee----------------	0-6	4.2-16	3.2-12	3.5-6.0
	6-27	5.6-11	4.2-8.2	3.5-6.0
	27-39	2.5-8.1	1.9-6.0	3.5-6.0
	39-45	---	---	---
14E:				
Cowee----------------	0-6	4.2-16	3.2-12	3.5-6.0
	6-27	5.6-11	4.2-8.2	3.5-6.0
	27-39	2.5-8.1	1.9-6.0	3.5-6.0
	39-45	---	---	---
15D:				
Cowee----------------	0-6	4.2-16	3.2-12	3.5-6.0
	6-27	5.6-11	4.2-8.2	3.5-6.0
	27-39	2.5-8.1	1.9-6.0	3.5-6.0
	39-45	---	---	---
15E:				
Cowee----------------	0-6	4.2-16	3.2-12	3.5-6.0
	6-27	5.6-11	4.2-8.2	3.5-6.0
	27-39	2.5-8.1	1.9-6.0	3.5-6.0
	39-45	---	---	---
16D:				
Cowee----------------	0-6	4.2-16	3.2-12	3.5-6.0
	6-27	5.6-11	4.2-8.2	3.5-6.0
	27-39	2.5-8.1	1.9-6.0	3.5-6.0
	39-45	---	---	---
Rock outcrop.				
16E:				
Cowee----------------	0-6	4.2-16	3.2-12	3.5-6.0
	6-27	5.6-11	4.2-8.2	3.5-6.0
	27-39	2.5-8.1	1.9-6.0	3.5-6.0
	39-45	---	---	---
Rock outcrop.				
17A:				
Craigsville----------	0-6	3.8-13	2.6-9.6	4.5-5.5
	6-32	1.2-5.4	0.9-4.1	4.5-5.5
	32-62	1.2-4.2	0.9-3.1	4.5-5.5
18C:				
Cullasaja------------	0-6	13-40	9.9-30	4.5-6.0
	6-21	13-40	9.9-30	4.5-6.0
	21-42	2.4-11	1.8-8.1	4.5-6.0
	42-62	1.6-6.0	1.2-4.5	4.5-6.0
18D:				
Cullasaja------------	0-6	13-40	9.9-30	4.5-6.0
	6-21	13-40	9.9-30	4.5-6.0
	21-42	2.4-11	1.8-8.1	4.5-6.0
	42-62	1.6-6.0	1.2-4.5	4.5-6.0

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
19A:				
Delanco	0-10	6.2-15	4.7-12	3.5-5.5
	10-16	1.8-8.0	1.3-6.0	3.5-5.5
	16-41	6.3-12	4.7-8.7	3.5-5.5
	41-47	5.2-11	3.9-7.9	3.5-5.5
	47-62	1.8-9.9	1.3-7.4	3.5-5.5
19B:				
Delanco	0-10	6.2-15	4.7-12	3.5-5.5
	10-16	1.8-8.0	1.3-6.0	3.5-5.5
	16-41	6.3-12	4.7-8.7	3.5-5.5
	41-47	5.2-11	3.9-7.9	3.5-5.5
	47-62	1.8-9.9	1.3-7.4	3.5-5.5
20C:				
Delanco	0-10	6.2-15	4.7-12	3.5-5.5
	10-16	1.8-8.0	1.3-6.0	3.5-5.5
	16-41	6.3-12	4.7-8.7	3.5-5.5
	41-47	5.2-11	3.9-7.9	3.5-5.5
	47-62	1.8-9.9	1.3-7.4	3.5-5.5
21B:				
Edneytown	0-4	2.0-11	2.0-8.0	4.5-5.5
	4-7	1.0-5.0	1.0-4.0	4.5-5.5
	7-20	5.0-10	4.0-7.0	4.5-5.5
	20-27	3.0-7.0	2.0-6.0	4.5-5.5
	27-62	1.0-5.0	1.0-4.0	4.5-5.5
21C:				
Edneytown	0-4	2.0-11	2.0-8.0	4.5-5.5
	4-7	1.0-5.0	1.0-4.0	4.5-5.5
	7-20	5.0-10	4.0-7.0	4.5-5.5
	20-27	3.0-7.0	2.0-6.0	4.5-5.5
	27-62	1.0-5.0	1.0-4.0	4.5-5.5
21D:				
Edneytown	0-4	2.0-11	2.0-8.0	4.5-5.5
	4-7	1.0-5.0	1.0-4.0	4.5-5.5
	7-20	5.0-10	4.0-7.0	4.5-5.5
	20-27	3.0-7.0	2.0-6.0	4.5-5.5
	27-62	1.0-5.0	1.0-4.0	4.5-5.5
21E:				
Edneytown	0-4	2.0-11	2.0-8.0	4.5-5.5
	4-7	1.0-5.0	1.0-4.0	4.5-5.5
	7-20	5.0-10	4.0-7.0	4.5-5.5
	20-27	3.0-7.0	2.0-6.0	4.5-5.5
	27-62	1.0-5.0	1.0-4.0	4.5-5.5
21F:				
Edneytown	0-4	2.0-11	2.0-8.0	4.5-5.5
	4-7	1.0-5.0	1.0-4.0	4.5-5.5
	7-20	5.0-10	4.0-7.0	4.5-5.5
	20-27	3.0-7.0	2.0-6.0	4.5-5.5
	27-62	1.0-5.0	1.0-4.0	4.5-5.5

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
22C:				
Edneytown------------	0-4	2.0-11	2.0-8.0	4.5-5.5
	4-7	1.0-5.0	1.0-4.0	4.5-5.5
	7-20	5.0-10	4.0-7.0	4.5-5.5
	20-27	3.0-7.0	2.0-6.0	4.5-5.5
	27-62	1.0-5.0	1.0-4.0	4.5-5.5
Urban land.				
23C:				
Edneyville-----------	0-5	4.0-18	3.0-14	4.5-6.0
	5-11	2.4-9.5	1.8-7.1	4.5-6.0
	11-34	1.7-6.8	1.3-5.1	4.5-6.0
	34-62	1.2-5.0	0.9-3.7	4.5-6.0
23D:				
Edneyville-----------	0-5	4.0-18	3.0-14	4.5-6.0
	5-11	2.4-9.5	1.8-7.1	4.5-6.0
	11-34	1.7-6.8	1.3-5.1	4.5-6.0
	34-62	1.2-5.0	0.9-3.7	4.5-6.0
23E:				
Edneyville-----------	0-5	4.0-18	3.0-14	4.5-6.0
	5-11	2.4-9.5	1.8-7.1	4.5-6.0
	11-34	1.7-6.8	1.3-5.1	4.5-6.0
	34-62	1.2-5.0	0.9-3.7	4.5-6.0
24D:				
Edneyville-----------	0-5	4.0-18	3.0-14	4.5-6.0
	5-11	2.4-9.5	1.8-7.1	4.5-6.0
	11-34	1.7-6.8	1.3-5.1	4.5-6.0
	34-62	1.2-5.0	0.9-3.7	4.5-6.0
24E:				
Edneyville-----------	0-5	4.0-18	3.0-14	4.5-6.0
	5-11	2.4-9.5	1.8-7.1	4.5-6.0
	11-34	1.7-6.8	1.3-5.1	4.5-6.0
	34-62	1.2-5.0	0.9-3.7	4.5-6.0
24F:				
Edneyville-----------	0-5	4.0-18	3.0-14	4.5-6.0
	5-11	2.4-9.5	1.8-7.1	4.5-6.0
	11-34	1.7-6.8	1.3-5.1	4.5-6.0
	34-62	1.2-5.0	0.9-3.7	4.5-6.0
25B:				
Elsinboro------------	0-10	4.2-11	3.2-8.4	4.5-5.5
	10-18	2.6-6.2	1.9-4.6	4.5-5.5
	18-45	4.5-9.6	3.4-7.2	4.5-5.5
	45-62	2.0-9.6	1.5-7.2	4.5-5.5
26B:				
Elsinboro------------	0-10	4.2-11	3.2-8.4	4.5-5.5
	10-18	2.6-6.2	1.9-4.6	4.5-5.5
	18-45	4.5-9.6	3.4-7.2	4.5-5.5
	45-62	2.0-9.6	1.5-7.2	4.5-5.5
Urban land.				

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
27D:				
Evard----------------	0-8	3.5-16	5.0-12	3.5-6.0
	8-35	4.5-9.9	3.4-7.4	4.5-5.5
	35-79	1.2-6.1	0.9-4.6	4.5-5.5
Cowee----------------	0-6	4.2-16	3.2-12	3.5-6.0
	6-27	5.6-11	4.2-8.2	3.5-6.0
	27-39	2.5-8.1	1.9-6.0	3.5-6.0
	39-45	---	---	---
28B:				
Glenelg--------------	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
28C:				
Glenelg--------------	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
28D:				
Glenelg--------------	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
28E:				
Glenelg--------------	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
28F:				
Glenelg--------------	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
29C:				
Glenelg--------------	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
29D:				
Glenelg--------------	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
29E:				
Glenelg--------------	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
30C:				
Glenelg--------------	0-4	6.0-13	4.5-9.8	4.5-6.5
	4-24	5.0-9.1	3.8-6.8	4.5-6.5
	24-62	1.2-6.1	0.9-4.6	4.5-6.5
Urban land.				

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
31D:				
Greenlee	0-7	3.0-15	2.0-11	3.6-6.0
	7-53	3.0-11	2.0-8.0	3.6-6.0
	53-62	1.0-6.0	1.0-4.0	3.6-6.0
31E:				
Greenlee	0-7	3.0-15	2.0-11	3.6-6.0
	7-53	3.0-11	2.0-8.0	3.6-6.0
	53-62	1.0-6.0	1.0-4.0	3.6-6.0
32A:				
Hatboro	0-8	7.0-20	5.2-15	4.5-7.3
	8-45	5.2-13	3.9-10	4.5-7.3
	45-62	1.8-17	1.3-13	5.6-6.5
33B:				
Hayesville	0-6	1.8-4.2	1.4-3.2	4.5-6.0
	6-11	0.5-3.1	0.4-2.3	4.5-6.0
	11-43	3.5-6.1	2.6-4.6	4.5-6.0
	43-49	2.0-5.1	1.5-3.8	4.5-6.0
	49-62	1.0-3.6	0.8-2.7	4.5-6.0
33C:				
Hayesville	0-6	1.8-4.2	1.4-3.2	4.5-6.0
	6-11	0.5-3.1	0.4-2.3	4.5-6.0
	11-43	3.5-6.1	2.6-4.6	4.5-6.0
	43-49	2.0-5.1	1.5-3.8	4.5-6.0
	49-62	1.0-3.6	0.8-2.7	4.5-6.0
33D:				
Hayesville	0-6	1.8-4.2	1.4-3.2	4.5-6.0
	6-11	0.5-3.1	0.4-2.3	4.5-6.0
	11-43	3.5-6.1	2.6-4.6	4.5-6.0
	43-49	2.0-5.1	1.5-3.8	4.5-6.0
	49-62	1.0-3.6	0.8-2.7	4.5-6.0
34B:				
Keener	0-5	6.2-24	4.7-18	3.5-6.0
	5-14	3.5-11	2.6-8.1	3.5-6.0
	14-54	5.1-11	3.8-8.2	3.5-6.0
	54-62	2.7-9.9	2.0-7.6	3.5-6.0
34C:				
Keener	0-5	6.2-24	4.7-18	3.5-6.0
	5-14	3.5-11	2.6-8.1	3.5-6.0
	14-54	5.1-11	3.8-8.2	3.5-6.0
	54-62	2.7-9.9	2.0-7.6	3.5-6.0
34D:				
Keener	0-5	6.2-24	4.7-18	3.5-6.0
	5-14	3.5-11	2.6-8.1	3.5-6.0
	14-54	5.1-11	3.8-8.2	3.5-6.0
	54-62	2.7-9.9	2.0-7.6	3.5-6.0
35C:				
Keener	0-5	6.2-24	4.7-18	3.5-6.0
	5-14	3.5-11	2.6-8.1	3.5-6.0
	14-54	5.1-11	3.8-8.2	3.5-6.0
	54-62	2.7-9.9	2.0-7.6	3.5-6.0

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
35D:				
Keener---------------	0-5	6.2-24	4.7-18	3.5-6.0
	5-14	3.5-11	2.6-8.1	3.5-6.0
	14-54	5.1-11	3.8-8.2	3.5-6.0
	54-62	2.7-9.9	2.0-7.6	3.5-6.0
36A:				
Kinkora--------------	0-7	5.8-18	4.3-14	3.5-5.5
	7-16	4.6-14	3.5-10	3.5-5.5
	16-38	12-20	9.2-15	3.5-5.5
	38-48	5.2-11	3.9-7.9	3.5-5.5
	48-62	3.5-8.1	2.6-6.1	3.5-5.5
37C:				
Konnarock------------	0-4	3.6-11	2.7-8.1	3.5-6.0
	4-19	4.9-8.5	3.7-6.4	3.5-6.0
	19-23	3.8-7.4	2.8-5.5	3.5-6.0
	23-33	---	---	---
37D:				
Konnarock------------	0-4	3.6-11	2.7-8.1	3.5-6.0
	4-19	4.9-8.5	3.7-6.4	3.5-6.0
	19-23	3.8-7.4	2.8-5.5	3.5-6.0
	23-33	---	---	---
37E:				
Konnarock------------	0-4	3.6-11	2.7-8.1	3.5-6.0
	4-19	4.9-8.5	3.7-6.4	3.5-6.0
	19-23	3.8-7.4	2.8-5.5	3.5-6.0
	23-33	---	---	---
38C:				
McCamy---------------	0-5	2.9-14	2.2-11	3.5-5.5
	5-9	2.0-9.0	1.8-6.8	3.5-5.5
	9-23	4.5-9.9	3.4-7.4	3.5-5.5
	23-26	1.2-12	0.9-9.3	3.5-5.5
	26-31	---	---	---
	31-41	---	---	---
38D:				
McCamy---------------	0-5	2.9-14	2.2-11	3.5-5.5
	5-9	2.0-9.0	1.8-6.8	3.5-5.5
	9-23	4.5-9.9	3.4-7.4	3.5-5.5
	23-26	1.2-12	0.9-9.3	3.5-5.5
	26-31	---	---	---
	31-41	---	---	---
39D:				
McCamy---------------	0-5	2.9-14	2.2-11	3.5-5.5
	5-9	2.0-9.0	1.8-6.8	3.5-5.5
	9-23	4.5-9.9	3.4-7.4	3.5-5.5
	23-26	1.2-12	0.9-9.3	3.5-5.5
	26-31	---	---	---
	31-41	---	---	---

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
39E:				
McCamy---------------	0-5	2.9-14	2.2-11	3.5-5.5
	5-9	2.0-9.0	1.8-6.8	3.5-5.5
	9-23	4.5-9.9	3.4-7.4	3.5-5.5
	23-26	1.2-12	0.9-9.3	3.5-5.5
	26-31	---	---	---
	31-41	---	---	---
40D:				
Mt Rogers------------	0-16	20-51	15-38	3.5-6.0
	16-33	2.4-18	1.8-13	3.5-6.0
	33-62	2.4-8.5	1.8-6.4	3.5-6.0
Bloodyhorse----------	0-12	20-51	15-38	3.5-6.0
	12-28	2.4-18	1.8-13	3.5-6.0
	28-37	2.4-8.5	1.8-6.4	3.5-6.0
	37-47	---	---	---
Rock outcrop.				
40F:				
Mt Rogers------------	0-16	20-51	15-38	3.5-6.0
	16-33	2.4-18	1.8-13	3.5-6.0
	33-62	2.4-8.5	1.8-6.4	3.5-6.0
Bloodyhorse----------	0-12	20-51	15-38	3.5-6.0
	12-28	2.4-18	1.8-13	3.5-6.0
	28-37	2.4-8.5	1.8-6.4	3.5-6.0
	37-47	---	---	---
Rock outcrop.				
41C:				
Mt Rogers------------	0-16	20-51	15-38	3.5-6.0
	16-33	2.4-18	1.8-13	3.5-6.0
	33-62	2.4-8.5	1.8-6.4	3.5-6.0
Buzzrock-------------	0-14	20-51	15-38	3.5-6.0
	14-20	2.4-18	1.8-13	3.5-6.0
	20-42	2.4-8.5	1.8-6.4	3.5-6.0
	42-52	---	---	---
41D:				
Mt Rogers------------	0-16	20-51	15-38	3.5-6.0
	16-33	2.4-18	1.8-13	3.5-6.0
	33-62	2.4-8.5	1.8-6.4	3.5-6.0
Buzzrock-------------	0-14	20-51	15-38	3.5-6.0
	14-20	2.4-18	1.8-13	3.5-6.0
	20-42	2.4-8.5	1.8-6.4	3.5-6.0
	42-52	---	---	---
42C:				
Peaks----------------	0-4	4.0-13	3.0-9.8	4.5-6.0
	4-8	1.0-5.1	0.8-3.8	4.5-6.0
	8-23	1.2-5.6	0.9-4.2	4.5-6.0
	23-32	1.2-5.6	0.9-4.2	4.5-6.0
	32-42	---	---	---

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
42D:				
Peaks----------------	0-4	4.0-13	3.0-9.8	4.5-6.0
	4-8	1.0-5.1	0.8-3.8	4.5-6.0
	8-23	1.2-5.6	0.9-4.2	4.5-6.0
	23-32	1.2-5.6	0.9-4.2	4.5-6.0
	32-42	---	---	---
42E:				
Peaks----------------	0-4	4.0-13	3.0-9.8	4.5-6.0
	4-8	1.0-5.1	0.8-3.8	4.5-6.0
	8-23	1.2-5.6	0.9-4.2	4.5-6.0
	23-32	1.2-5.6	0.9-4.2	4.5-6.0
	32-42	---	---	---
43C:				
Peaks----------------	0-4	4.0-13	3.0-9.8	4.5-6.0
	4-8	1.0-5.1	0.8-3.8	4.5-6.0
	8-23	1.2-5.6	0.9-4.2	4.5-6.0
	23-32	1.2-5.6	0.9-4.2	4.5-6.0
	32-42	---	---	---
43D:				
Peaks----------------	0-4	4.0-13	3.0-9.8	4.5-6.0
	4-8	1.0-5.1	0.8-3.8	4.5-6.0
	8-23	1.2-5.6	0.9-4.2	4.5-6.0
	23-32	1.2-5.6	0.9-4.2	4.5-6.0
	32-42	---	---	---
43E:				
Peaks----------------	0-4	4.0-13	3.0-9.8	4.5-6.0
	4-8	1.0-5.1	0.8-3.8	4.5-6.0
	8-23	1.2-5.6	0.9-4.2	4.5-6.0
	23-32	1.2-5.6	0.9-4.2	4.5-6.0
	32-42	---	---	---
43F:				
Peaks----------------	0-4	4.0-13	3.0-9.8	4.5-6.0
	4-8	1.0-5.1	0.8-3.8	4.5-6.0
	8-23	1.2-5.6	0.9-4.2	4.5-6.0
	23-32	1.2-5.6	0.9-4.2	4.5-6.0
	32-42	---	---	---
44C:				
Pigeonroost----------	0-5	4.2-16	3.2-12	3.5-6.0
	5-24	4.5-9.9	3.4-7.4	3.5-6.0
	24-37	2.0-7.4	1.5-5.5	3.5-6.0
	37-72	---	---	---
44D:				
Pigeonroost----------	0-5	4.2-16	3.2-12	3.5-6.0
	5-24	4.5-9.9	3.4-7.4	3.5-6.0
	24-37	2.0-7.4	1.5-5.5	3.5-6.0
	37-72	---	---	---
44E:				
Pigeonroost----------	0-5	4.2-16	3.2-12	3.5-6.0
	5-24	4.5-9.9	3.4-7.4	3.5-6.0
	24-37	2.0-7.4	1.5-5.5	3.5-6.0
	37-72	---	---	---

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
45D:				
Pigeonroost----------	0-5	4.2-16	3.2-12	3.5-6.0
	5-24	4.5-9.9	3.4-7.4	3.5-6.0
	24-37	2.0-7.4	1.5-5.5	3.5-6.0
	37-72	---	---	---
45E:				
Pigeonroost----------	0-5	4.2-16	3.2-12	3.5-6.0
	5-24	4.5-9.9	3.4-7.4	3.5-6.0
	24-37	2.0-7.4	1.5-5.5	3.5-6.0
	37-72	---	---	---
46E:				
Pigeonroost----------	0-5	4.2-16	3.2-12	3.5-6.0
	5-24	4.5-9.9	3.4-7.4	3.5-6.0
	24-37	2.0-7.4	1.5-5.5	3.5-6.0
	37-72	---	---	---
Rock outcrop.				
47D:				
Pineola--------------	0-10	8.8-23	6.6-17	3.5-6.0
	10-15	3.1-7.2	2.3-5.4	3.5-6.0
	15-26	4.5-9.9	3.4-7.4	3.5-6.0
	26-29	1.2-5.6	0.9-4.2	3.5-6.0
	29-72	---	---	---
48E:				
Pineola--------------	0-10	8.8-23	6.6-17	3.5-6.0
	10-15	3.1-7.2	2.3-5.4	3.5-6.0
	15-26	4.5-9.9	3.4-7.4	3.5-6.0
	26-29	1.2-5.6	0.9-4.2	3.5-6.0
	29-72	---	---	---
49.				
Pits, quarries				
50F:				
Rock outcrop.				
Peaks----------------	0-4	4.0-13	3.0-9.8	4.5-6.0
	4-8	1.0-5.1	0.8-3.8	4.5-6.0
	8-23	1.2-5.6	0.9-4.2	4.5-6.0
	23-32	1.2-5.6	0.9-4.2	4.5-6.0
	32-42	---	---	---
51B:				
Scales---------------	0-2	65-200	50-150	4.5-6.0
	2-11	65-200	50-150	4.5-6.0
	11-21	2.4-20	1.8-15	4.5-6.0
	21-33	5.6-11	4.2-8.2	4.5-6.0
	33-62	5.6-11	4.2-8.2	4.5-6.0
52C:				
Sylco----------------	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-22	3.1-11	2.3-8.2	3.5-5.5
	22-27	2.7-9.8	2.0-7.3	3.5-5.5
	27-37	---	---	---

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
52C:				
Sylvatus	0-2	3.6-11	2.7-8.1	3.5-5.0
	2-11	2.7-9.8	2.0-7.3	3.5-5.0
	11-16	2.6-9.9	1.9-7.4	3.5-5.0
	16-26	---	---	---
52D:				
Sylco	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-22	3.1-11	2.3-8.2	3.5-5.5
	22-27	2.7-9.8	2.0-7.3	3.5-5.5
	27-37	---	---	---
Sylvatus	0-2	3.6-11	2.7-8.1	3.5-5.0
	2-11	2.7-9.8	2.0-7.3	3.5-5.0
	11-16	2.6-9.9	1.9-7.4	3.5-5.0
	16-26	---	---	---
52E:				
Sylco	0-4	3.6-11	2.7-8.1	3.5-5.5
	4-22	3.1-11	2.3-8.2	3.5-5.5
	22-27	2.7-9.8	2.0-7.3	3.5-5.5
	27-37	---	---	---
Sylvatus	0-2	3.6-11	2.7-8.1	3.5-5.0
	2-11	2.7-9.8	2.0-7.3	3.5-5.0
	11-16	2.6-9.9	1.9-7.4	3.5-5.0
	16-26	---	---	---
53B:				
Tate	0-6	4.0-18	3.0-13	4.5-6.5
	6-12	2.8-11	1.9-8.2	4.5-6.5
	12-27	4.5-11	3.4-8.2	4.5-6.5
	27-47	3.0-9.9	2.2-7.4	4.5-6.5
	47-62	1.2-7.4	0.9-5.5	4.5-6.5
53C:				
Tate	0-6	4.0-18	3.0-13	4.5-6.5
	6-12	2.8-11	1.9-8.2	4.5-6.5
	12-27	4.5-11	3.4-8.2	4.5-6.5
	27-47	3.0-9.9	2.2-7.4	4.5-6.5
	47-62	1.2-7.4	0.9-5.5	4.5-6.5
53D:				
Tate	0-6	4.0-18	3.0-13	4.5-6.5
	6-12	2.8-11	1.9-8.2	4.5-6.5
	12-27	4.5-11	3.4-8.2	4.5-6.5
	27-47	3.0-9.9	2.2-7.4	4.5-6.5
	47-62	1.2-7.4	0.9-5.5	4.5-6.5
53E:				
Tate	0-6	4.0-18	3.0-13	4.5-6.5
	6-12	2.8-11	1.9-8.2	4.5-6.5
	12-27	4.5-11	3.4-8.2	4.5-6.5
	27-47	3.0-9.9	2.2-7.4	4.5-6.5
	47-62	1.2-7.4	0.9-5.5	4.5-6.5

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
54C:				
Tate	0-6	4.0-18	3.0-13	4.5-6.5
	6-12	2.8-11	1.9-8.2	4.5-6.5
	12-27	4.5-11	3.4-8.2	4.5-6.5
	27-47	3.0-9.9	2.2-7.4	4.5-6.5
	47-62	1.2-7.4	0.9-5.5	4.5-6.5
54D:				
Tate	0-6	4.0-18	3.0-13	4.5-6.5
	6-12	2.8-11	1.9-8.2	4.5-6.5
	12-27	4.5-11	3.4-8.2	4.5-6.5
	27-47	3.0-9.9	2.2-7.4	4.5-6.5
	47-62	1.2-7.4	0.9-5.5	4.5-6.5
54E:				
Tate	0-6	4.0-18	3.0-13	4.5-6.5
	6-12	2.8-11	1.9-8.2	4.5-6.5
	12-27	4.5-11	3.4-8.2	4.5-6.5
	27-47	3.0-9.9	2.2-7.4	4.5-6.5
	47-62	1.2-7.4	0.9-5.5	4.5-6.5
55D:				
Tate	0-6	4.0-18	3.0-13	4.5-6.5
	6-12	2.8-11	1.9-8.2	4.5-6.5
	12-27	4.5-11	3.4-8.2	4.5-6.5
	27-47	3.0-9.9	2.2-7.4	4.5-6.5
	47-62	1.2-7.4	0.9-5.5	4.5-6.5
56C:				
Thunder	0-5	15-38	11-29	5.1-6.5
	5-12	13-34	9.8-25	5.1-6.5
	12-21	1.8-7.9	1.3-5.9	5.1-6.5
	21-50	3.8-11	2.8-8.3	5.1-6.5
	50-62	1.2-9.9	0.9-7.4	5.1-6.5
56D:				
Thunder	0-5	15-38	11-29	5.1-6.5
	5-12	13-34	9.8-25	5.1-6.5
	12-21	1.8-7.9	1.3-5.9	5.1-6.5
	21-50	3.8-11	2.8-8.3	5.1-6.5
	50-62	1.2-9.9	0.9-7.4	5.1-6.5
56E:				
Thunder	0-5	15-38	11-29	5.1-6.5
	5-12	13-34	9.8-25	5.1-6.5
	12-21	1.8-7.9	1.3-5.9	5.1-6.5
	21-50	3.8-11	2.8-8.3	5.1-6.5
	50-62	1.2-9.9	0.9-7.4	5.1-6.5
57C:				
Thunder	0-5	15-38	11-29	5.1-6.5
	5-12	13-34	9.8-25	5.1-6.5
	12-21	1.8-7.9	1.3-5.9	5.1-6.5
	21-50	3.8-11	2.8-8.3	5.1-6.5
	50-62	1.2-9.9	0.9-7.4	5.1-6.5

Table 17.—Chemical Soil Properties—Continued

Map symbol and soil name	Depth	Cation-exchange capacity	Effective cation-exchange capacity	Soil reaction
	Inches	meq/100 g	meq/100 g	pH
57D:				
Thunder	0-5	15-38	11-29	5.1-6.5
	5-12	13-34	9.8-25	5.1-6.5
	12-21	1.8-7.9	1.3-5.9	5.1-6.5
	21-50	3.8-11	2.8-8.3	5.1-6.5
	50-62	1.2-9.9	0.9-7.4	5.1-6.5
57E:				
Thunder	0-5	15-38	11-29	5.1-6.5
	5-12	13-34	9.8-25	5.1-6.5
	12-21	1.8-7.9	1.3-5.9	5.1-6.5
	21-50	3.8-11	2.8-8.3	5.1-6.5
	50-62	1.2-9.9	0.9-7.4	5.1-6.5
58D.				
Udorthents-Urban land				
59D:				
Unicoi	0-5	2.4-9.5	1.8-7.1	3.5-5.5
	5-14	1.2-6.4	0.9-4.6	3.5-5.5
	14-19	1.2-6.1	0.9-4.6	3.5-5.5
	19-29	---	---	---
59E:				
Unicoi	0-5	2.4-9.5	1.8-7.1	3.5-5.5
	5-14	1.2-6.4	0.9-4.6	3.5-5.5
	14-19	1.2-6.1	0.9-4.6	3.5-5.5
	19-29	---	---	---
W.				
Water				

Table 18.—Water Features

(Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
1C:										
Balsam-----------	B	Low	Jan-Dec	---	---	---	---	None	---	None
1D:										
Balsam-----------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
1E:										
Balsam-----------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
2D:										
Balsam-----------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Nopan------------	D	Very high	Jan-May	0.0-0.5	>6.0	---	---	None	---	None
			June-Sept	0.5-6.0	>6.0	---	---	None	---	None
			Oct-Dec	0.0-0.5	>6.0	---	---	None	---	None
2E:										
Balsam-----------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Nopan------------	D	Very high	Jan-May	0.0-0.5	>6.0	---	---	None	---	None
			June-Sept	0.5-6.0	>6.0	---	---	None	---	None
			Oct-Dec	0.0-0.5	>6.0	---	---	None	---	None
3D:										
Bloodyhorse------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
4F:										
Bloodyhorse------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
5B:										
Braddock---------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
5C:										
Braddock---------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
5D:										
Braddock---------	B	High	Jan-Dec	---	---	---	---	None	---	None
6E:										
Braddock---------	B	High	Jan-Dec	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
7D:										
Brevard----------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Greenlee---------	B	Low	Jan-Dec	---	---	---	---	None	---	None
8C:										
Burton-----------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
9D:										
Burton-----------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
9E:										
Burton-----------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
10D:										
Peaks------------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Chestnut---------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
10E:										
Chestnut---------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Peaks------------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
11F:										
Chestnut---------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Peaks------------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Tuckasegee-------	A	Medium	Jan-Dec	---	---	---	---	None	---	None
12A:										
Codorus----------	C	Very high	Jan-May	1.0-2.0	>6.0	---	---	None	Brief	Frequent
			June-Sept	2.0-6.6	>6.0	---	---	None	Brief	Frequent
			Oct-Nov	1.0-2.0	>6.0	---	---	None	Brief	Frequent
13A:										
Comus------------	B	Low	Jan-Dec	---	---	---	---	None	Brief	Frequent
14C:										
Cowee------------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
14D:										
Cowee------------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
14E:										
Cowee------------	B	Very high	Jan-Dec	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
15D:										
Cowee	B	Very high	Jan-Dec	---	---	---	---	None	---	None
15E:										
Cowee	B	Very high	Jan-Dec	---	---	---	---	None	---	None
16D:										
Cowee	B	Very high	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D	---	Jan-Dec	---	---	---	---	None	---	None
16E:										
Cowee	B	Very high	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop	D	---	Jan-Dec	---	---	---	---	None	---	None
17A:										
Craigsville	B	Very low	Jan-Dec	---	---	---	---	None	Brief	Frequent
18C:										
Cullasaja	B	Low	Jan-Dec	---	---	---	---	None	---	None
18D:										
Cullasaja	B	Medium	Jan-Dec	---	---	---	---	None	---	None
19A:										
Delanco	C	Low	Jan-May	1.0-2.5	>6.0	---	---	None	Very brief	Rare
			June	2.5-6.0	>6.0	---	---	None	Very brief	Rare
			July-Aug	---	---	---	---	None	Very brief	Rare
			September	2.5-6.0	>6.0	---	---	None	Very brief	Rare
			Oct-Dec	1.0-2.5	>6.0	---	---	None	Very brief	Rare
19B:										
Delanco	C	Medium	Jan-May	1.0-2.5	>6.0	---	---	None	Very brief	Rare
			June	2.5-6.0	>6.0	---	---	None	Very brief	Rare
			July-Aug	---	---	---	---	None	Very brief	Rare
			September	2.5-6.0	>6.0	---	---	None	Very brief	Rare
			Oct-Dec	1.0-2.5	>6.0	---	---	None	Very brief	Rare
20C:										
Delanco	C	Medium	Jan-May	1.0-2.5	>6.0	---	---	None	---	None
			June	2.5-6.0	>6.0	---	---	None	---	None
			July-Aug	---	---	---	---	None	---	None
			September	2.5-6.0	>6.0	---	---	None	---	None
			Oct-Dec	1.0-2.5	>6.0	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
21B:										
Edneytown--------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
21C:										
Edneytown--------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
21D:										
Edneytown--------	B	High	Jan-Dec	---	---	---	---	None	---	None
21E:										
Edneytown--------	B	High	Jan-Dec	---	---	---	---	None	---	None
21F:										
Edneytown--------	B	High	Jan-Dec	---	---	---	---	None	---	None
22C:										
Edneytown--------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Urban land.										
23C:										
Edneyville-------	B	Low	Jan-Dec	---	---	---	---	None	---	None
23D:										
Edneyville-------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
23E:										
Edneyville-------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
24D:										
Edneyville-------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
24E:										
Edneyville-------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
24F:										
Edneyville-------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
25B:										
Elsinboro--------	B	Medium	Jan-Dec	---	---	---	---	None	Very brief	Rare
26B:										
Elsinboro--------	B	Low	Jan-Dec	---	---	---	---	None	Very brief	Rare
Urban land.										

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
27D:										
Evard	B	High	Jan-Dec	---	---	---	---	None	---	None
Cowee	B	Very high	Jan-Dec	---	---	---	---	None	---	None
28B:										
Glenelg	B	Medium	Jan-Dec	---	---	---	---	None	---	None
28C:										
Glenelg	B	Medium	Jan-Dec	---	---	---	---	None	---	None
28D:										
Glenelg	B	High	Jan-Dec	---	---	---	---	None	---	None
28E:										
Glenelg	B	High	Jan-Dec	---	---	---	---	None	---	None
28F:										
Glenelg	B	High	Jan-Dec	---	---	---	---	None	---	None
29C:										
Glenelg	B	Medium	Jan-Dec	---	---	---	---	None	---	None
29D:										
Glenelg	B	High	Jan-Dec	---	---	---	---	None	---	None
29E:										
Glenelg	B	High	Jan-Dec	---	---	---	---	None	---	None
30C:										
Glenelg	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Urban land.										
31D:										
Greenlee	B	Medium	Jan-Dec	---	---	---	---	None	---	None
31E:										
Greenlee	B	Medium	Jan-Dec	---	---	---	---	None	---	None
32A:										
Hatboro	D	Negligible	Jan-May	0.0-0.5	>6.0	0.1-0.5	Brief	Frequent	Brief	Frequent
			June-Sept	0.5-6.0	>6.0	0.1-0.5	Brief	Frequent	Brief	Frequent
			Oct-Dec	0.0-0.5	>6.0	0.1-0.5	Brief	Frequent	Brief	Frequent
33B:										
Hayesville	B	Medium	Jan-Dec	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
33C:										
Hayesville-------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
33D:										
Hayesville-------	B	High	Jan-Dec	---	---	---	---	None	---	None
34B:										
Keener-----------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
34C:										
Keener-----------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
34D:										
Keener-----------	B	High	Jan-Dec	---	---	---	---	None	---	None
35C:										
Keener-----------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
35D:										
Keener-----------	B	High	Jan-Dec	---	---	---	---	None	---	None
36A:										
Kinkora----------	D	Negligible	Jan-May	0.0-0.5	>6.0	0.1-0.5	Brief	Occasional	Very brief	Rare
			June	0.5-6.0	>6.0	0.1-0.5	Brief	Occasional	Very brief	Rare
			July-Sept	0.5-6.0	>6.0	0.1-0.5	Brief	Occasional	Very brief	Rare
			Oct-Dec	0.0-0.5	>6.0	0.1-0.5	Brief	Occasional	Very brief	Rare
37C:										
Konnarock--------	C	High	Jan-Dec	---	---	---	---	None	---	None
37D:										
Konnarock--------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
37E:										
Konnarock--------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
38C:										
McCamy-----------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
38D:										
McCamy-----------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
39D:										
McCamy-----------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
39E:										
McCamy-----------	B	Very high	Jan-Dec	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
40D:										
Mt Rogers--------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Bloodyhorse------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.										
40F:										
Mt Rogers--------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Bloodyhorse------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.										
41C:										
Mt Rogers--------	B	Low	Jan-Dec	---	---	---	---	None	---	None
Buzzrock---------	B	Low	Jan-Dec	---	---	---	---	None	---	None
41D:										
Mt Rogers--------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
Buzzrock---------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
42C:										
Peaks------------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
42D:										
Peaks------------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
42E:										
Peaks------------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
43C:										
Peaks------------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
43D:										
Peaks------------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
43E:										
Peaks------------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
43F:										
Peaks------------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
44C:										
Pigeonroost------	B	Very high	Jan-Dec	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
44D:										
Pigeonroost------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
44E:										
Pigeonroost------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
45D:										
Pigeonroost------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
45E:										
Pigeonroost------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
46E:										
Pigeonroost------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
Rock outcrop.										
47D:										
Pineola----------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
48E:										
Pineola----------	B	Very high	Jan-Dec	---	---	---	---	None	---	None
49.										
Pits, quarries										
50F:										
Rock outcrop.										
Peaks------------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
51B:										
Scales-----------	D	Very high	Jan-June	0.0-0.5	>6.0	---	---	None	---	None
			July-Aug	0.5-6.0	>6.0	---	---	None	---	None
			Sep-Dec	0.0-0.5	>6.0	---	---	None	---	None
52C:										
Sylco------------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Sylvatus---------	D	Very high	Jan-Dec	---	---	---	---	None	---	None
52D:										
Sylco------------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Sylvatus---------	D	Very high	Jan-Dec	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table: Upper limit	Water table: Lower limit	Ponding: Surface water depth	Ponding: Duration	Ponding: Frequency	Flooding: Duration	Flooding: Frequency
				Ft	Ft	Ft				
52E:										
Sylco------------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
Sylvatus---------	D	Very high	Jan-Dec	---	---	---	---	None	---	None
53B:										
Tate-------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
53C:										
Tate-------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
53D:										
Tate-------------	B	High	Jan-Dec	---	---	---	---	None	---	None
53E:										
Tate-------------	B	High	Jan-Dec	---	---	---	---	None	---	None
54C:										
Tate-------------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
54D:										
Tate-------------	B	High	Jan-Dec	---	---	---	---	None	---	None
54E:										
Tate-------------	B	High	Jan-Dec	---	---	---	---	None	---	None
55D:										
Tate-------------	B	High	Jan-Dec	---	---	---	---	None	---	None
56C:										
Thunder----------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
56D:										
Thunder----------	B	High	Jan-Dec	---	---	---	---	None	---	None
56E:										
Thunder----------	B	High	Jan-Dec	---	---	---	---	None	---	None
57C:										
Thunder----------	B	Medium	Jan-Dec	---	---	---	---	None	---	None
57D:										
Thunder----------	B	High	Jan-Dec	---	---	---	---	None	---	None
57E:										
Thunder----------	B	High	Jan-Dec	---	---	---	---	None	---	None

Table 18.—Water Features—Continued

Map symbol and soil name	Hydro-logic group	Surface runoff	Month	Water table		Ponding			Flooding	
				Upper limit	Lower limit	Surface water depth	Duration	Frequency	Duration	Frequency
				Ft	Ft	Ft				
58D:										
Udorthents-------	D	Very high	Jan-Dec	---	---	---	---	None	---	None
Urban land.										
59D:										
Unicoi-----------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
59E:										
Unicoi-----------	C	Very high	Jan-Dec	---	---	---	---	None	---	None
W.										
Water										

Table 19.—Soil Features

(See text for definitions of terms used in this table. Absence of an entry indicates that the feature is not a concern or that data were not estimated)

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
1C:						
Balsam	---	---	---	Moderate	High	High
1D:						
Balsam	---	---	---	Moderate	High	High
1E:						
Balsam	---	---	---	Moderate	High	High
2D:						
Balsam	---	---	---	Moderate	High	High
Nopan	---	---	---	High	High	High
2E:						
Balsam	---	---	---	Moderate	High	High
Nopan	---	---	---	High	High	High
3D:						
Bloodyhorse	Lithic bedrock	20-40	Indurated	Moderate	Moderate	High
4F:						
Bloodyhorse	Lithic bedrock	20-40	Indurated	Moderate	Moderate	High
5B:						
Braddock	---	---	---	Moderate	High	Moderate
5C:						
Braddock	---	---	---	Moderate	High	Moderate
5D:						
Braddock	---	---	---	Moderate	High	Moderate
6E:						
Braddock	---	---	---	Moderate	High	Moderate
7D:						
Brevard	---	---	---	Moderate	Moderate	Moderate
Greenlee	---	---	---	Moderate	Low	High

Table 19.—Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In				
8C:						
Burton	Paralithic bedrock	20-40	Moderately cemented	Moderate	High	High
	Lithic bedrock	20-40	Indurated			
9D:						
Burton	Paralithic bedrock	20-40	Moderately cemented	Moderate	High	High
	Lithic bedrock	20-40	Indurated			
9E:						
Burton	Paralithic bedrock	20-40	Moderately cemented	Moderate	High	High
	Lithic bedrock	20-40	Indurated			
10D:						
Peaks	Lithic bedrock	20-40	Indurated	Moderate	Low	High
Chestnut	Paralithic bedrock	20-40	Moderately cemented	Moderate	Low	High
	Lithic bedrock	40-180	Indurated			
10E:						
Chestnut	Paralithic bedrock	20-40	Moderately cemented	Moderate	Low	High
	Lithic bedrock	40-180	Indurated			
Peaks	Lithic bedrock	20-40	Indurated	Moderate	Low	High
11F:						
Chestnut	Paralithic bedrock	20-40	Moderately cemented	Moderate	Low	High
	Lithic bedrock	40-180	Indurated			
Peaks	Lithic bedrock	20-40	Indurated	Moderate	Low	High
Tuckasegee	---	---	---	Moderate	Moderate	Moderate
12A:						
Codorus	---	---	---	High	High	Moderate
13A:						
Comus	---	---	---	Moderate	Low	High
14C:						
Cowee	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High

Table 19.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
14D:						
Cowee	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
14E:						
Cowee	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
15D:						
Cowee	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
15E:						
Cowee	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
16D:						
Cowee	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
Rock outcrop	Lithic bedrock	0-0	Indurated	None	---	---
16E:						
Cowee	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
Rock outcrop	Lithic bedrock	0-0	Indurated	None	---	---
17A:						
Craigsville	---	---	---	Moderate	Moderate	Moderate
18C:						
Cullasaja	---	---	---	Moderate	High	High
18D:						
Cullasaja	---	---	---	Moderate	High	High
19A:						
Delanco	---	---	---	High	High	High
19B:						
Delanco	---	---	---	High	High	High
20C:						
Delanco	---	---	---	High	High	High
21B:						
Edneytown	---	---	---	Moderate	Moderate	Moderate

Table 19.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
21C:						
Edneytown	---	---	---	Moderate	Moderate	Moderate
21D:						
Edneytown	---	---	---	Moderate	Moderate	Moderate
21E:						
Edneytown	---	---	---	Moderate	Moderate	Moderate
21F:						
Edneytown	---	---	---	Moderate	Moderate	Moderate
22C:						
Edneytown	---	---	---	Moderate	Moderate	Moderate
Urban land.						
23C:						
Edneyville	---	---	---	Moderate	Low	High
23D:						
Edneyville	---	---	---	Moderate	Low	High
23E:						
Edneyville	---	---	---	Moderate	Low	High
24D:						
Edneyville	---	---	---	Moderate	Low	High
24E:						
Edneyville	---	---	---	Moderate	Low	High
24F:						
Edneyville	---	---	---	Moderate	Low	High
25B:						
Elsinboro	---	---	---	Moderate	Moderate	High
26B:						
Elsinboro	---	---	---	Moderate	Moderate	High
Urban land.						
27D:						
Evard	---	---	---	Moderate	Moderate	High
Cowee	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High

Table 19.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
28B:						
Glenelg	---	---	---	Moderate	Low	High
28C:						
Glenelg	---	---	---	Moderate	Low	High
28D:						
Glenelg	---	---	---	Moderate	Low	High
28E:						
Glenelg	---	---	---	Moderate	Low	High
28F:						
Glenelg	---	---	---	Moderate	Low	High
29C:						
Glenelg	---	---	---	Moderate	Low	High
29D:						
Glenelg	---	---	---	Moderate	Low	High
29E:						
Glenelg	---	---	---	Moderate	Low	High
30C:						
Glenelg	---	---	---	Moderate	Low	High
Urban land.						
31D:						
Greenlee	---	---	---	Moderate	Low	High
31E:						
Greenlee	---	---	---	Moderate	Low	High
32A:						
Hatboro	---	---	---	High	High	Moderate
33B:						
Hayesville	---	---	---	Moderate	Moderate	Moderate
33C:						
Hayesville	---	---	---	Moderate	Moderate	Moderate
33D:						
Hayesville	---	---	---	Moderate	Moderate	Moderate

Table 19.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
34B:						
Keener	---	---	---	Moderate	Moderate	Moderate
34C:						
Keener	---	---	---	Moderate	Moderate	Moderate
34D:						
Keener	---	---	---	Moderate	Moderate	Moderate
35C:						
Keener	---	---	---	Moderate	Moderate	Moderate
35D:						
Keener	---	---	---	Moderate	Moderate	Moderate
36A:						
Kinkora	---	---	---	High	High	High
37C:						
Konnarock	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
37D:						
Konnarock	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
37E:						
Konnarock	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
38C:						
McCamy	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
	Lithic bedrock	20-40	Indurated			
38D:						
McCamy	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
	Lithic bedrock	20-40	Indurated			
39D:						
McCamy	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
	Lithic bedrock	20-40	Indurated			
39E:						
McCamy	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
	Lithic bedrock	20-40	Indurated			

Table 19.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
40D:						
Mt Rogers-------------	---	---	---	Moderate	Moderate	High
Bloodyhorse-----------	Lithic bedrock	20-40	Indurated	Moderate	Moderate	High
Rock outcrop----------	Lithic bedrock	0-0	Indurated	None	---	---
40F:						
Mt Rogers-------------	---	---	---	Moderate	Moderate	High
Bloodyhorse-----------	Lithic bedrock	20-40	Indurated	Moderate	Moderate	High
Rock outcrop----------	Lithic bedrock	0-0	Indurated	None	---	---
41C:						
Mt Rogers-------------	---	---	---	Moderate	Moderate	High
Buzzrock--------------	Lithic bedrock	40-60	Indurated	Moderate	Moderate	High
41D:						
Mt Rogers-------------	---	---	---	Moderate	Moderate	High
Buzzrock--------------	Lithic bedrock	40-60	Indurated	Moderate	Moderate	High
42C:						
Peaks-----------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
42D:						
Peaks-----------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
42E:						
Peaks-----------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
43C:						
Peaks-----------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
43D:						
Peaks-----------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
43E:						
Peaks-----------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
43F:						
Peaks-----------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
44C:						
Pigeonroost-----------	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High

Table 19.—Soil Features—Continued

Map symbol and soil name	Restrictive layer: Kind	Restrictive layer: Depth to top	Restrictive layer: Hardness	Potential for frost action	Risk of corrosion: Uncoated steel	Risk of corrosion: Concrete
		In				
44D:						
Pigeonroost-----------	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
44E:						
Pigeonroost-----------	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
45D:						
Pigeonroost-----------	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
45E:						
Pigeonroost-----------	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
46E:						
Pigeonroost-----------	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
Rock outcrop-----------	Lithic bedrock	0-0	Indurated	None	---	---
47D:						
Pineola---------------	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
48E:						
Pineola---------------	Paralithic bedrock	20-40	Moderately cemented	Moderate	Moderate	High
49:						
Pits, quarries---------	Lithic bedrock	0-0	---	None	---	---
50F:						
Rock outcrop-----------	Lithic bedrock	0-0	Indurated	None	---	---
Peaks-----------------	Lithic bedrock	20-40	Indurated	Moderate	Low	High
51B:						
Scales----------------	Dense material	11-40	Noncemented	High	High	High
52C:						
Sylco-----------------	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
Sylvatus--------------	Lithic bedrock	10-20	Indurated	Moderate	Moderate	Moderate

Table 19.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
52D:						
Sylco------------------	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
Sylvatus---------------	Lithic bedrock	10-20	Indurated	Moderate	Moderate	Moderate
52E:						
Sylco------------------	Lithic bedrock	20-40	Indurated	Moderate	Low	Moderate
Sylvatus---------------	Lithic bedrock	10-20	Indurated	Moderate	Moderate	Moderate
53B:						
Tate-------------------	---	---	---	Moderate	Moderate	Moderate
53C:						
Tate-------------------	---	---	---	Moderate	Moderate	Moderate
53D:						
Tate-------------------	---	---	---	Moderate	Moderate	Moderate
53E:						
Tate-------------------	---	---	---	Moderate	Moderate	Moderate
54C:						
Tate-------------------	---	---	---	Moderate	Moderate	Moderate
54D:						
Tate-------------------	---	---	---	Moderate	Moderate	Moderate
54E:						
Tate-------------------	---	---	---	Moderate	Moderate	Moderate
55D:						
Tate-------------------	---	---	---	Moderate	Moderate	Moderate
56C:						
Thunder----------------	---	---	---	Moderate	Moderate	Moderate
56D:						
Thunder----------------	---	---	---	Moderate	Moderate	Moderate
56E:						
Thunder----------------	---	---	---	Moderate	Moderate	Moderate
57C:						
Thunder----------------	---	---	---	Moderate	Moderate	Moderate
57D:						
Thunder----------------	---	---	---	Moderate	Moderate	Moderate

Table 19.—Soil Features—Continued

Map symbol and soil name	Restrictive layer			Potential for frost action	Risk of corrosion	
	Kind	Depth to top	Hardness		Uncoated steel	Concrete
		In				
57E:						
Thunder	---	---	---	Moderate	Moderate	Moderate
58D.						
Udorthents-Urban land						
59D:						
Unicoi	Lithic bedrock	10-20	Indurated	Moderate	Low	Moderate
59E:						
Unicoi	Lithic bedrock	10-20	Indurated	Moderate	Low	Moderate
W.						
Water						

Table 20.—Classification of the Soils

Soil name	Family or higher taxonomic class
Balsam	Loamy-skeletal, isotic, frigid Humic Dystrudepts
Bloodyhorse	Loamy-skeletal, isotic, frigid Humic Dystrudepts
Braddock	Fine, mixed, semiactive, mesic Typic Hapludults
Brevard	Fine-loamy, parasesquic, mesic Typic Hapludults
Burton	Fine-loamy, isotic, frigid Humic Dystrudepts
Buzzrock	Loamy-skeletal over fragmental, isotic over mixed, frigid Humic Dystrudepts
Chestnut	Coarse-loamy, mixed, active, mesic Typic Dystrudepts
Codorus	Fine-loamy, mixed, active, mesic Fluvaquentic Dystrudepts
Comus	Coarse-loamy, mixed, active, mesic Fluventic Dystrudepts
Cowee	Fine-loamy, parasesquic, mesic Typic Hapludults
Craigsville	Loamy-skeletal, mixed, superactive, mesic Fluventic Dystrudepts
Cullasaja	Loamy-skeletal, isotic, mesic Humic Dystrudepts
Delanco	Fine-loamy, mixed, semiactive, mesic Aquic Hapludults
Edneytown	Fine-loamy, mixed, active, mesic Typic Hapludults
Edneyville	Coarse-loamy, mixed, active, mesic Typic Dystrudepts
Elsinboro	Fine-loamy, mixed, semiactive, mesic Typic Hapludults
Evard	Fine-loamy, parasesquic, mesic Typic Hapludults
Glenelg	Fine-loamy, mixed, semiactive, mesic Typic Hapludults
Greenlee	Loamy-skeletal, mixed, semiactive, mesic Typic Dystrudepts
Hatboro	Fine-loamy, mixed, active, nonacid, mesic Fluvaquentic Endoaquepts
Hayesville	Fine, kaolinitic, mesic Typic Kanhapludults
Keener	Fine-loamy, siliceous, semiactive, mesic Typic Hapludults
Kinkora	Fine, mixed, semiactive, mesic Typic Endoaquults
Konnarock	Loamy-skeletal, mixed, semiactive, mesic Typic Dystrudepts
McCamy	Fine-loamy, siliceous, semiactive, mesic Typic Hapludults
Mt Rogers	Loamy-skeletal, isotic, frigid Humic Dystrudepts
Nopan	Coarse-loamy, mixed, active, acid, frigid Typic Epiaquepts
Peaks	Loamy-skeletal, mixed, active, mesic Typic Dystrudepts
Pigeonroost	Fine-loamy, mixed, active, mesic Typic Hapludults
Pineola	Fine-loamy, mixed, active, mesic Humic Hapludults
Scales	Loamy, mixed, superactive, acid, frigid, shallow Histic Humaquepts
Sylco	Loamy-skeletal, mixed, active, mesic Typic Dystrudepts
Sylvatus	Loamy-skeletal, mixed, active, mesic Lithic Dystrudepts
Tate	Fine-loamy, mixed, semiactive, mesic Typic Hapludults
Thunder	Loamy-skeletal, mixed, active, mesic Humic Hapludults
Tuckasegee	Fine-loamy, isotic, mesic Humic Dystrudepts
Udorthents	Udorthents
Unicoi	Loamy-skeletal, mixed, semiactive, mesic Lithic Dystrudepts

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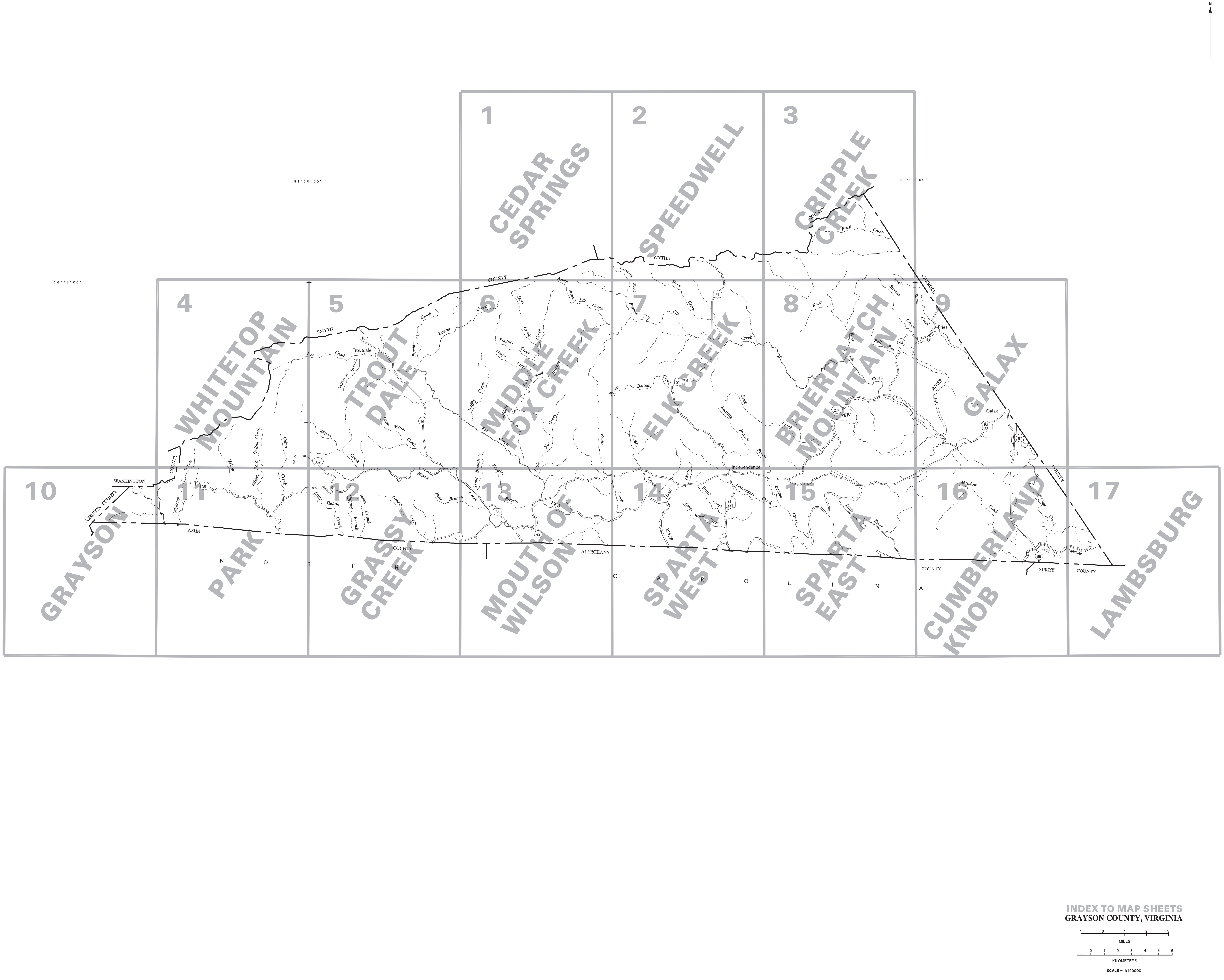


INDEX TO MAP SHEETS
GRAYSON COUNTY, VIRGINIA

UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

GRAYSON COUNTY, VIRGINIA

NEW RIVER SOIL AND WATER CONSERVATION DISTRICT
GRAYSON COUNTY BOARD OF COMMISSIONERS
VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION, DIVISION OF SOIL AND WATER CONSERVATION
VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

SOIL LEGEND

Map symbols and names are listed in numeric and alphabetical order. Map symbols consist of numbers, letters, or a combination of numbers and letters.

SYMBOL	NAME
1C	Balsam cobbly loam, 2 to 15 percent slopes, very bouldery
1D	Balsam cobbly loam, 15 to 35 percent slopes, very bouldery
1E	Balsam cobbly loam, 35 to 55 percent slopes, very bouldery
2D	Balsam-Nopan complex, 15 to 35 percent slopes, very bouldery
2E	Balsam-Nopan complex, 35 to 55 percent slopes, very bouldery
3D	Bloodyhorse gravelly loam, 7 to 35 percent slopes, very bouldery
4F	Bloodyhorse gravelly loam, 35 to 80 percent slopes, extremely bouldery
5B	Braddock loam, 2 to 7 percent slopes
5C	Braddock loam, 7 to 15 percent slopes
5D	Braddock loam, 15 to 25 percent slopes
6E	Braddock cobbly loam, 25 to 35 percent slopes
7D	Brevard-Greenlee complex, 8 to 25 percent slopes, very bouldery
8C	Burton loam, 7 to 15 percent slopes, stony
9D	Burton loam, 15 to 35 percent slopes, very stony
9E	Burton loam, 35 to 55 percent slopes, very stony
10D	Chestnut-Peaks complex, 8 to 25 percent slopes, very rocky
10E	Chestnut-Peaks complex, 25 to 45 percent slopes, very rocky
11F	Chestnut-Peaks-Tuckasegee complex, 45 to 90 percent slopes, very rocky
12A	Codorus loam, 0 to 3 percent slopes, frequently flooded
13A	Comus fine sandy loam, 0 to 3 percent slopes, frequently flooded
14C	Cowee loam, 7 to 15 percent slopes
14D	Cowee loam, 15 to 35 percent slopes
14E	Cowee loam, 35 to 55 percent slopes
15D	Cowee gravelly loam, 7 to 35 percent slopes, stony
15E	Cowee gravelly loam, 35 to 55 percent slopes, stony
16D	Cowee-Rock outcrop complex, 7 to 35 percent slopes
16E	Cowee-Rock outcrop complex, 35 to 55 percent slopes
17A	Craigsville cobbly sandy loam, 0 to 3 percent slopes, frequently flooded
18C	Cullasaja cobbly loam, 7 to 15 percent slopes, very stony
18D	Cullasaja cobbly loam, 15 to 35 percent slopes, very stony
19A	Delanco fine sandy loam, 0 to 2 percent slopes, rarely flooded
19B	Delanco fine sandy loam, 2 to 7 percent slopes, rarely flooded
20C	Delanco fine sandy loam, 7 to 15 percent slopes
21B	Edneytown loam, 2 to 7 percent slopes
21C	Edneytown loam, 7 to 15 percent slopes
21D	Edneytown loam, 15 to 25 percent slopes
21E	Edneytown loam, 25 to 35 percent slopes
21F	Edneytown loam, 35 to 55 percent slopes
22C	Edneytown-Urban land complex, 0 to 15 percent slopes
23C	Edneyville loam, 7 to 15 percent slopes
23D	Edneyville loam, 15 to 35 percent slopes
23E	Edneyville loam, 35 to 55 percent slopes
24D	Edneyville loam, 15 to 35 percent slopes, very stony
24E	Edneyville loam, 35 to 55 percent slopes, very stony
24F	Edneyville loam, 55 to 80 percent slopes, very stony
25B	Elsinboro fine sandy loam, 2 to 7 percent slopes, rarely flooded
26B	Elsinboro-Urban land complex, 0 to 7 percent slopes, rarely flooded
27D	Evard-Cowee complex, 15 to 25 percent slopes, stony
28B	Glenelg loam, 2 to 7 percent slopes
28C	Glenelg loam, 7 to 15 percent slopes
28D	Glenelg loam, 15 to 25 percent slopes
28E	Glenelg loam, 25 to 35 percent slopes
28F	Glenelg loam, 35 to 55 percent slopes
29C	Glenelg gravelly loam, 7 to 15 percent slopes, very stony
29D	Glenelg gravelly loam, 15 to 35 percent slopes, very stony
29E	Glenelg gravelly loam, 35 to 55 percent slopes, very stony
30C	Glenelg-Urban land complex, 0 to 15 percent slopes
31D	Greenlee very cobbly loam, 15 to 35 percent slopes, very stony
31E	Greenlee very cobbly loam, 35 to 55 percent slopes, very stony
32A	Hatboro sandy loam, 0 to 3 percent slopes, frequently flooded

SYMBOL	NAME
33B	Hayesville loam, 2 to 7 percent slopes
33C	Hayesville loam, 7 to 15 percent slopes
33D	Hayesville loam, 15 to 25 percent slopes
34B	Keener loam, 2 to 7 percent slopes
34C	Keener loam, 7 to 15 percent slopes
34D	Keener loam, 15 to 25 percent slopes
35C	Keener loam, 7 to 15 percent slopes, very stony
35D	Keener loam, 15 to 35 percent slopes, very stony
36A	Kinkora fine sandy loam, 0 to 3 percent slopes, rarely flooded
37C	Konnarock channery silt loam, 7 to 15 percent slopes
37D	Konnarock channery silt loam, 15 to 35 percent slopes
37E	Konnarock channery silt loam, 35 to 55 percent slopes
38C	McCamy fine sandy loam, 7 to 15 percent slopes
38D	McCamy fine sandy loam, 15 to 35 percent slopes
39D	McCamy fine sandy loam, 7 to 35 percent slopes, very stony
39E	McCamy fine sandy loam, 35 to 55 percent slopes, very stony
40D	Mt Rogers-Bloodyhorse-Rock outcrop complex, 7 to 35 percent slopes, rubbly, windswept
40F	Mt Rogers-Bloodyhorse-Rock outcrop complex, 35 to 80 percent slopes, rubbly, windswept
41C	Mt Rogers-Buzzrock complex, 7 to 15 percent slopes, very bouldery, windswept
41D	Mt Rogers-Buzzrock complex, 15 to 35 percent slopes, very bouldery, windswept
42C	Peaks very gravelly loam, 7 to 15 percent slopes
42D	Peaks very gravelly loam, 15 to 35 percent slopes
42E	Peaks very gravelly loam, 35 to 55 percent slopes
43C	Peaks very gravelly loam, 7 to 15 percent slopes, extremely stony
43D	Peaks very gravelly loam, 15 to 35 percent slopes, extremely stony
43E	Peaks very gravelly loam, 35 to 55 percent slopes, extremely stony
43F	Peaks very gravelly loam, 55 to 80 percent slopes, extremely stony
44C	Pigeonroost loam, 7 to 15 percent slopes
44D	Pigeonroost loam, 15 to 35 percent slopes
44E	Pigeonroost loam, 35 to 55 percent slopes
45D	Pigeonroost gravelly loam, 7 to 35 percent slopes, very stony
45E	Pigeonroost gravelly loam, 35 to 55 percent slopes, very stony
46E	Pigeonroost-Rock outcrop complex, 25 to 55 percent slopes
47D	Pineola loam, 15 to 35 percent slopes
48E	Pineola loam, 35 to 55 percent slopes, very stony
49	Pits, quarries
50F	Rock outcrop-Peaks complex, 25 to 80 percent slopes
51B	Scales mucky peak, 0 to 7 percent slopes, very bouldery
52C	Sylco-Sylvatus complex, 7 to 15 percent slopes
52D	Sylco-Sylvatus complex, 15 to 35 percent slopes
52E	Sylco-Sylvatus complex, 35 to 55 percent slopes
53B	Tate loam, 2 to 7 percent slopes
53C	Tate loam, 7 to 15 percent slopes
53D	Tate loam, 15 to 25 percent slopes
53E	Tate loam, 25 to 35 percent slopes
54C	Tate loam, 7 to 15 percent slopes, stony
54D	Tate loam, 15 to 35 percent slopes, stony
54E	Tate loam, 35 to 55 percent slopes, stony
55D	Tate loam, 7 to 35 percent slopes, extremely bouldery
56C	Thunder cobbly loam, 2 to 15 percent slopes
56D	Thunder cobbly loam, 15 to 35 percent slopes
56E	Thunder cobbly loam, 35 to 55 percent slopes
57C	Thunder cobbly loam, 2 to 15 percent slopes, very bouldery
57D	Thunder cobbly loam, 15 to 35 percent slopes, very bouldery
57E	Thunder cobbly loam, 35 to 55 percent slopes, very bouldery
58D	Udorthents-Urban land complex, 0 to 25 percent slopes
59D	Unicoi very gravelly sandy loam, 7 to 35 percent slopes, extremely stony
59E	Unicoi very gravelly sandy loam, 35 to 55 percent slopes, extremely stony
W	Water

CONVENTIONAL AND SPECIAL SYMBOLS LEGEND

CULTURAL FEATURES

BOUNDARIES

National, state, or province

County or parish

Reservation (national forest or park, state forest or park)

Limit of soil survey (label) and/or denied access area

Field sheet matchline & neatline

TRANSPORTATION

Divided roads

Other roads

ROAD EMBLEM & DESIGNATIONS

Federal 287

State 52

HYDROGRAPHIC FEATURES

STREAMS

Perennial, double line

Unclassified stream

Drainage end (Indicates direction of flow)

SPECIAL SYMBOLS FOR SOIL SURVEY AND SSURGO

SOIL DELINEATIONS AND SYMBOLS 5B 11B

MISCELLANEOUS SURFACE FEATURES

Bouldery spot

Gravelly spot

Mine or quarry

Rock outcrop (includes sandstone and shale)

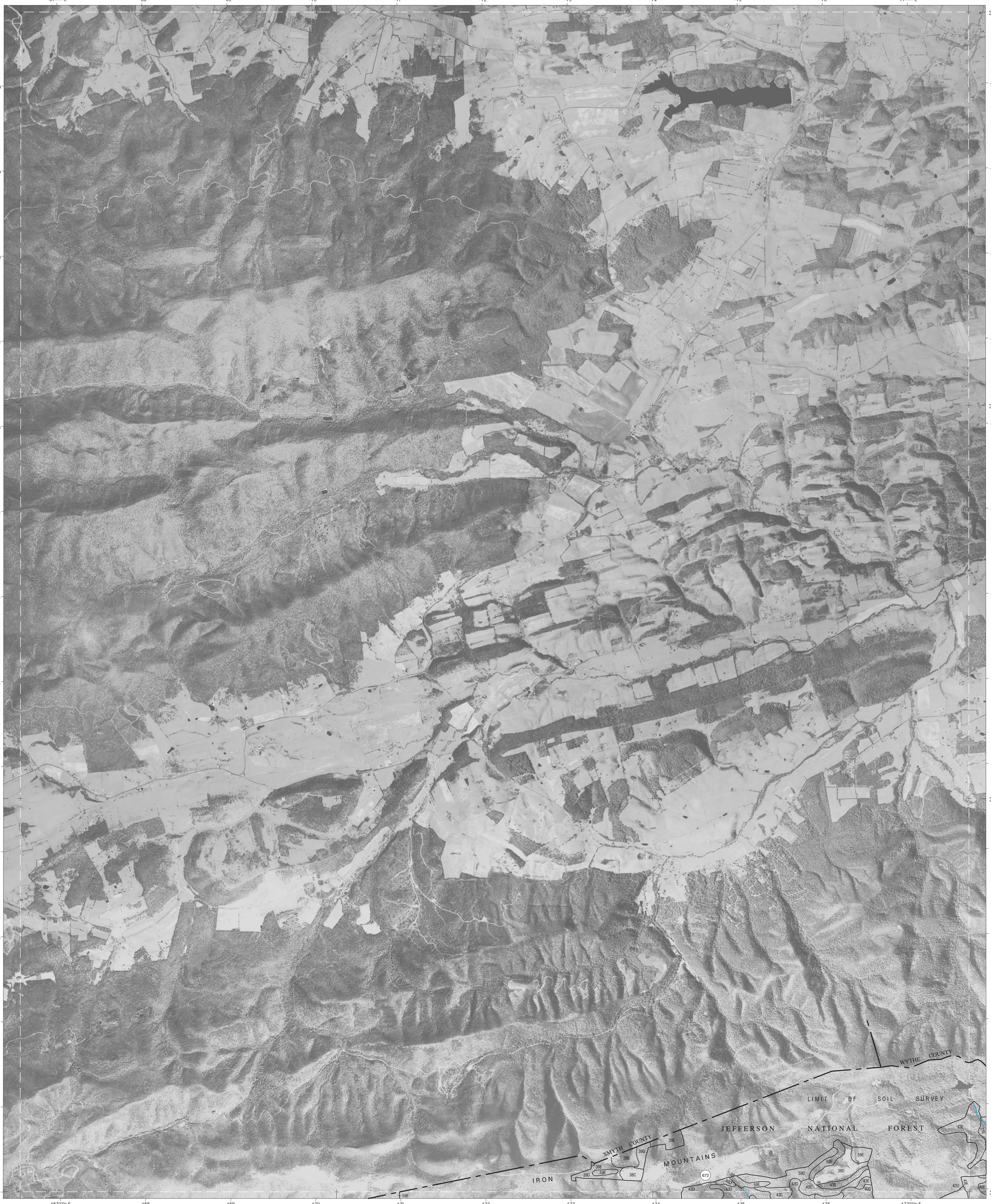
Rubbly spot

Stony spot

Very stony spot

Wet spot

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE



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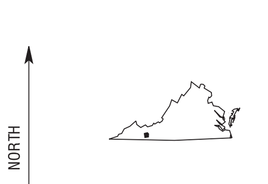
North American Datum of 1983 (NAD83). GRS80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 17.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.



QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

	■	2
5	6	7

2 SPEEDWELL
5 TROUT DALE
6 MIDDLE FOX CREEK
7 ELK CREEK

INDEX TO ADJOINING 7.5 MAPS

CEDAR SPRINGS, VIRGINIA

7.5 MINUTE SERIES
SHEET NUMBER 1 OF 17

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

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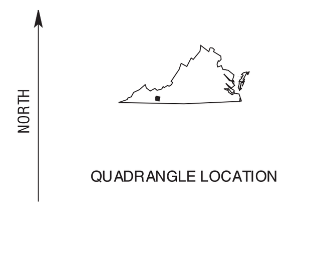


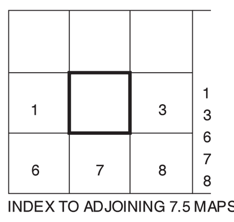
QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS



1 CEDAR SPRINGS
3 CRIPPLE CREEK
6 MIDDLE FOX CREEK
7 ELK CREEK
8 BRIERPATCH MOUNTAIN

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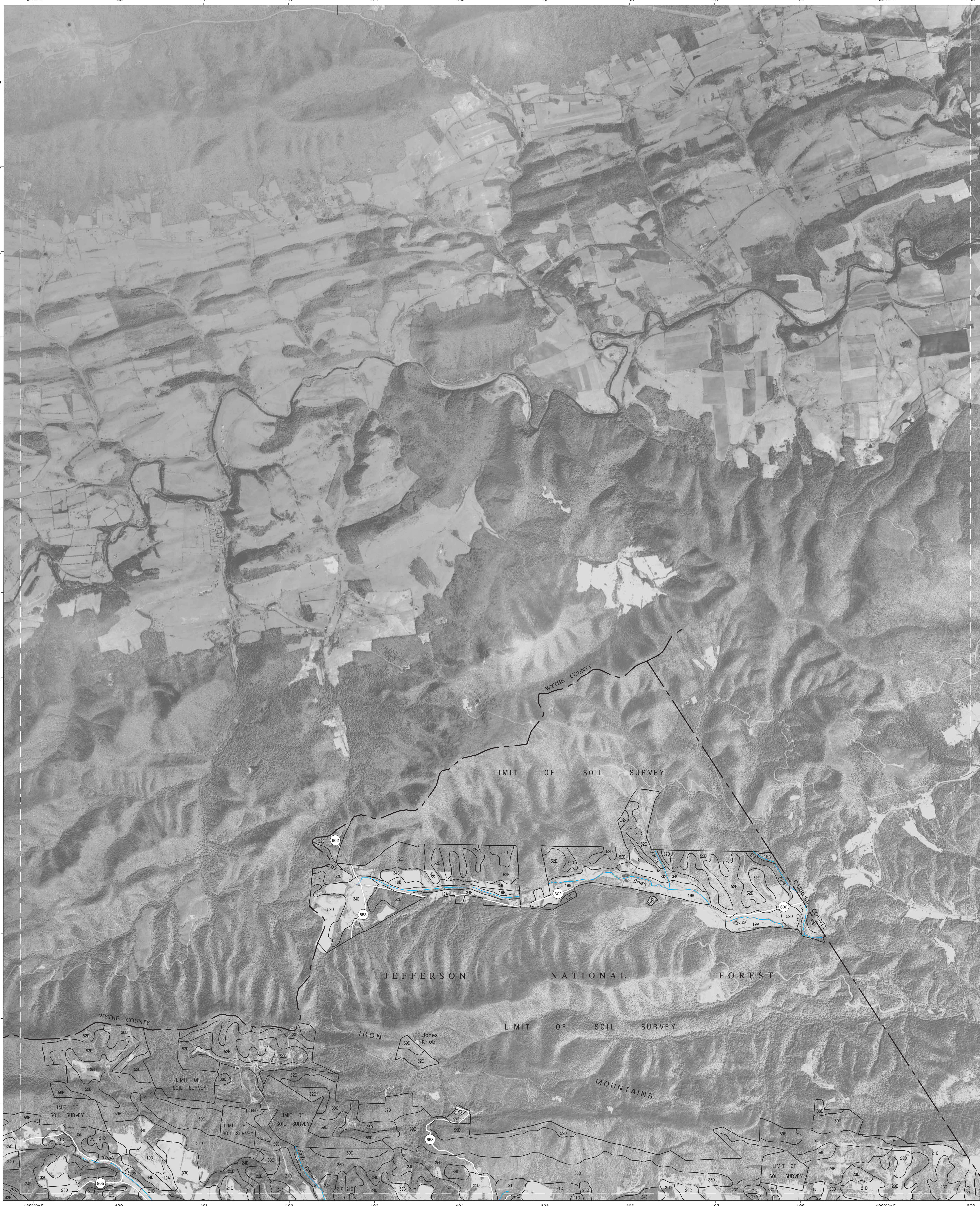
SPEEDWELL, VIRGINIA

7.5 MINUTE SERIES
SHEET NUMBER 2 OF 17

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.



Joins sheet 7 Elk Creek

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1000-meter ticks: Universal Transverse Mercator, zone 17.
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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

2			2	SPEEDWELL
7	8	9	7	ELK CREEK
			8	BRIERPATCH MOUNTAIN
			9	GALAX

INDEX TO ADJOINING 7.5 MAPS

CRIPPLE CREEK, VIRGINIA

7.5 MINUTE SERIES
SHEET NUMBER 3 OF 17

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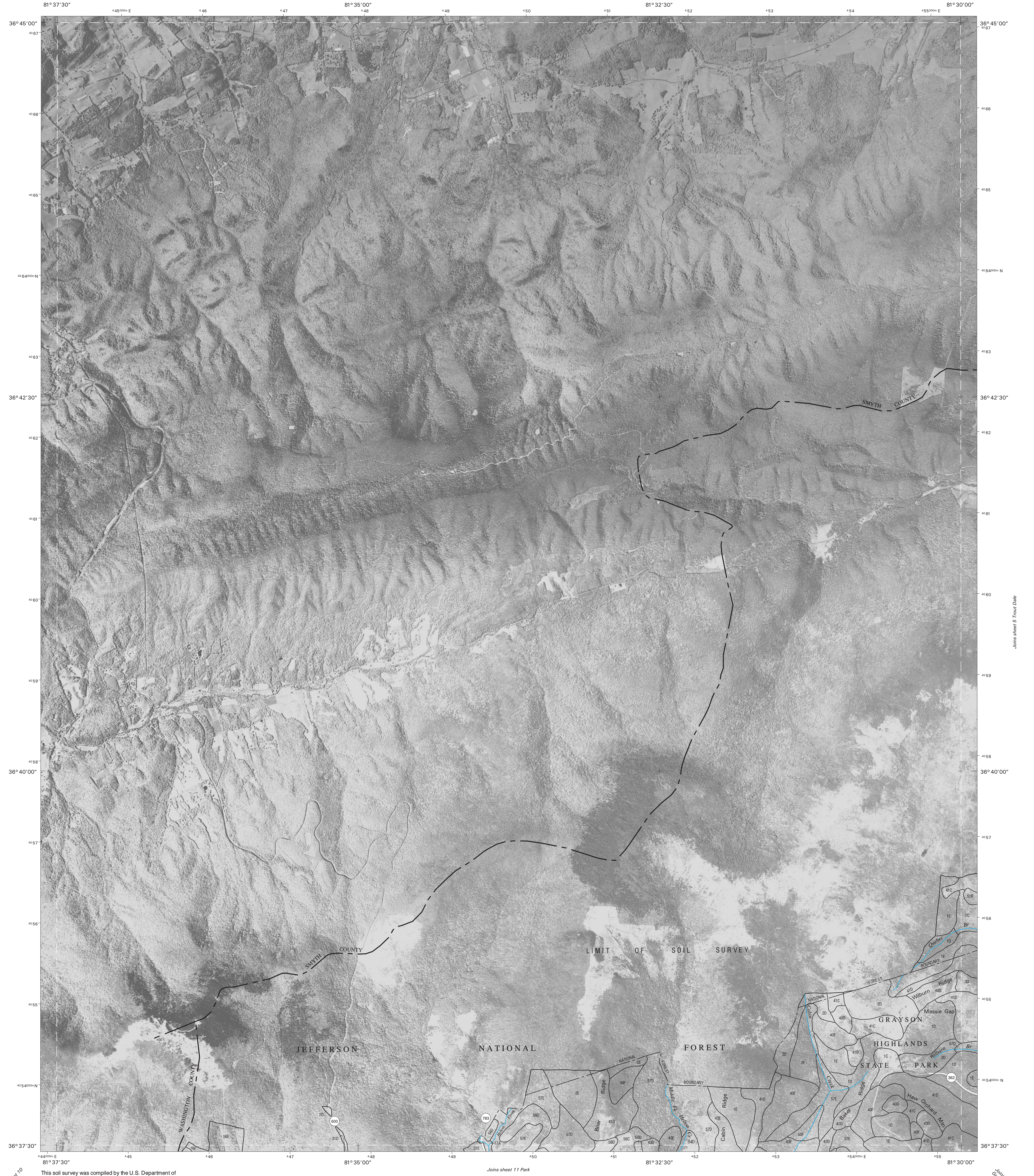
Joins sheet 9 Galax



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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

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5 TROUT DALE
10 GRAYSON
11 PARK
12 GRASSY CREEK

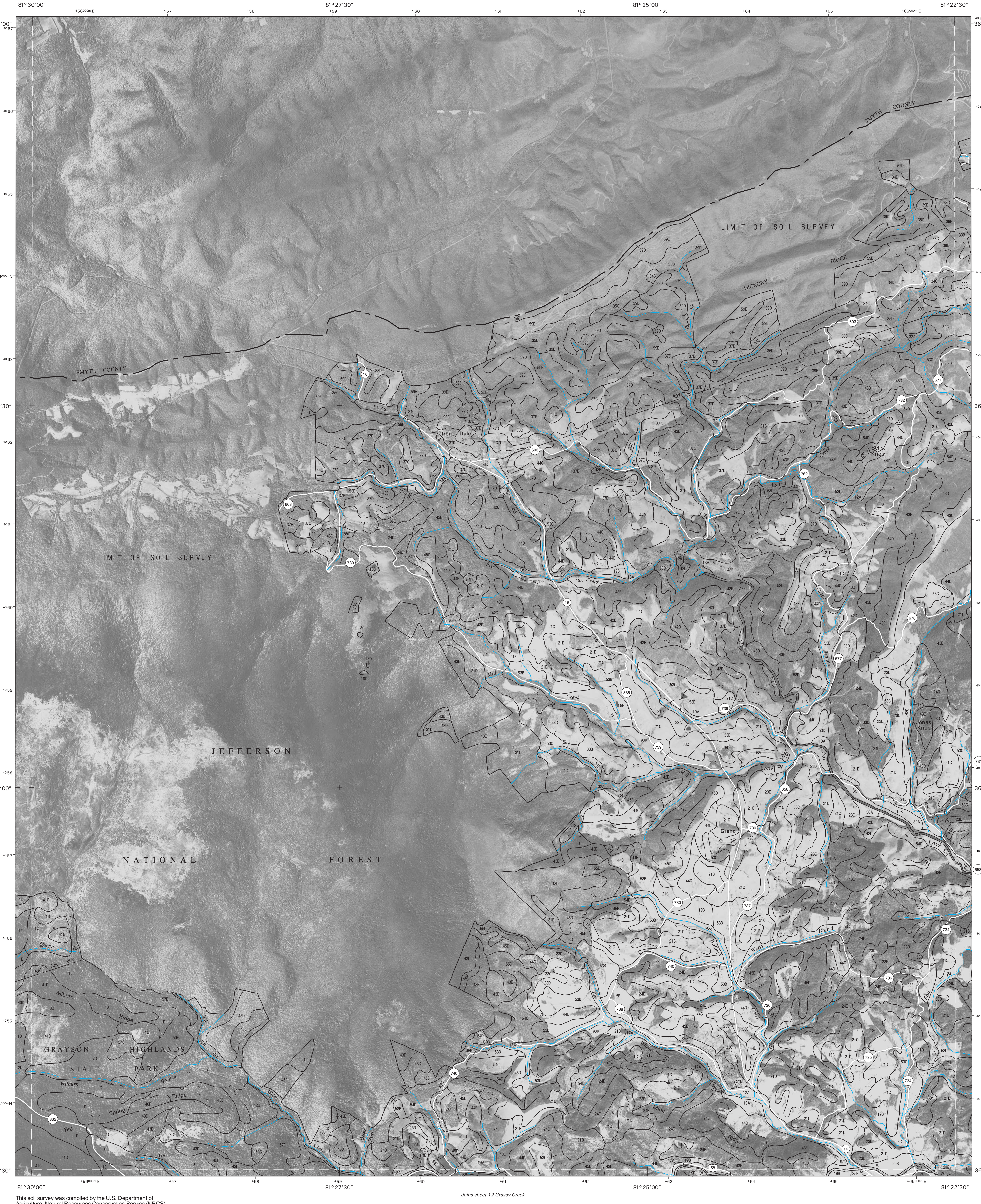
WHITETOP MOUNTAIN, VIRGINIA

7.5 MINUTE SERIES
SHEET NUMBER 4 OF 17

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

GRAYSON COUNTY, VIRGINIA
TROUT DALE QUADRANGLE
SHEET NUMBER 5 OF 17



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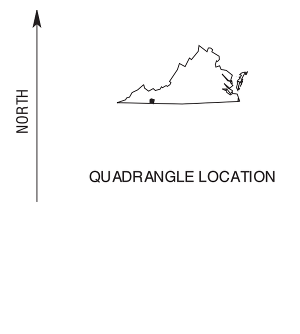

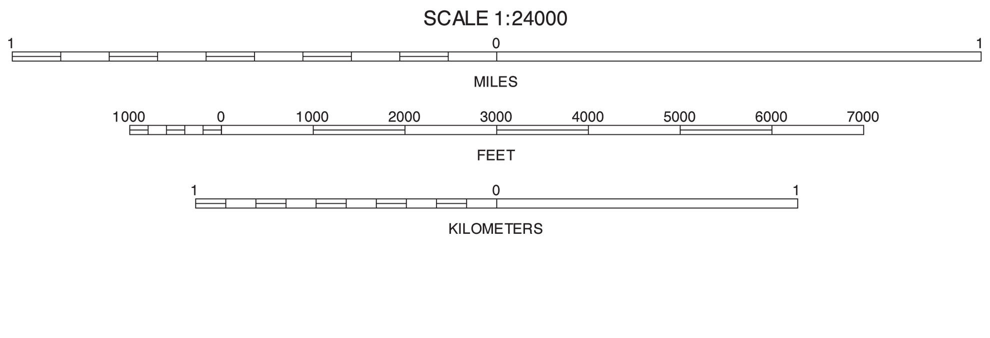

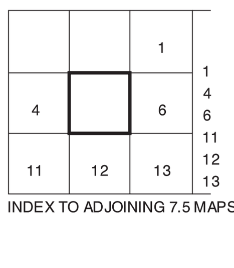

1 CEDAR SPRINGS
4 WHITETOP MOUNTAIN
6 MIDDLE FOX CREEK
11 PARK
12 GRASSY CREEK
13 MOUTH OF WILSON

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TROUT DALE, VIRGINIA

7.5 MINUTE SERIES
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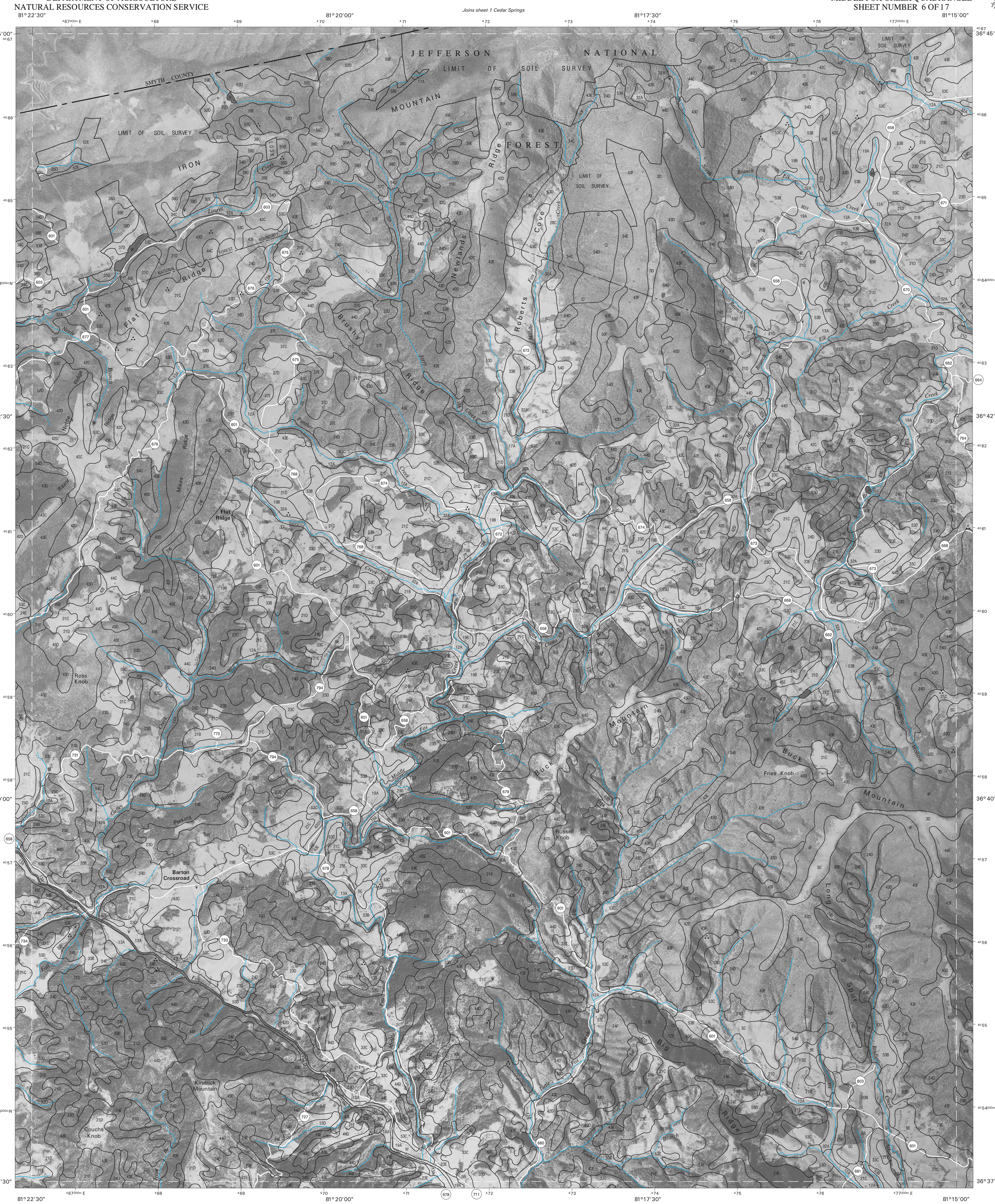
NATURAL RESOURCES CONSERVATION SERVICE

GRAYSON COUNTY, VIRGINIA
MIDDLE FOX CREEK QUADRANGLE
SHEET NUMBER 6 OF 17



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North American Datum of 1983 (NAD83). GRS80 Spheroid 1000-meter ticks: Universal Transverse Mercator, zone 17. Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

1 0 1
MILES

1000 0 1000 2000 3000 4000 5000 6000 7000
FEET

1 0 1
KILOMETERS

	1	2
5		7
12	13	14

1 CEDAR SPRINGS
2 SPEEDWELL
5 TROUT DALE
7 ELK CREEK
12 GRASSY CREEK
13 MOUTH OF WILSON
14 SPARTA WEST

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MIDDLE FOX CREEK, VIRGINIA
7.5 MINUTE SERIES
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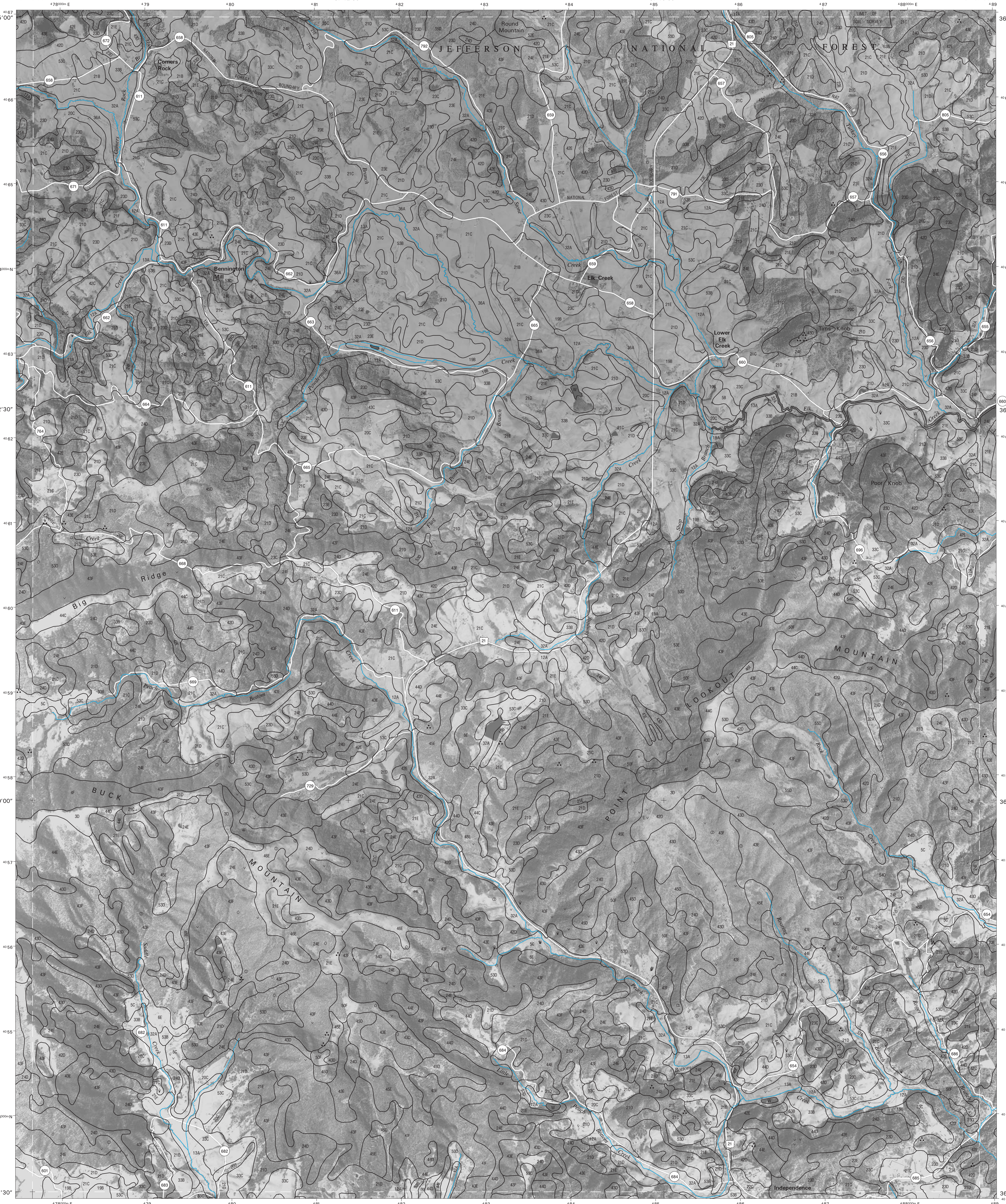
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

GRAYSON COUNTY, VIRGINIA
ELK CREEK QUADRANGLE
SHEET NUMBER 7 OF 17



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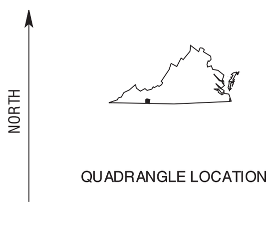
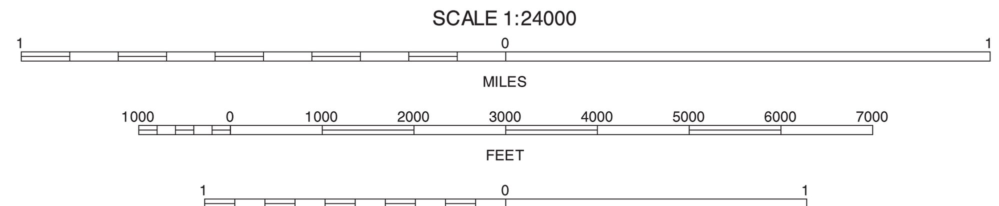


QUADRANGLE LOCATION

SCALE 1:24000



1	2	3
6		8
13	14	15

1 CEDAR SPRINGS
2 SPEEDWELL
3 CRIPPLE CREEK
6 MIDDLE FOX CREEK
8 BRIERPATCH MOUNTAIN
13 MOUTH OF WILSON
14 SPARTA WEST
15 SPARTA EAST

INDEX TO ADJOINING 7.5 MAPS

ELK CREEK, VIRGINIA
7.5 MINUTE SERIES
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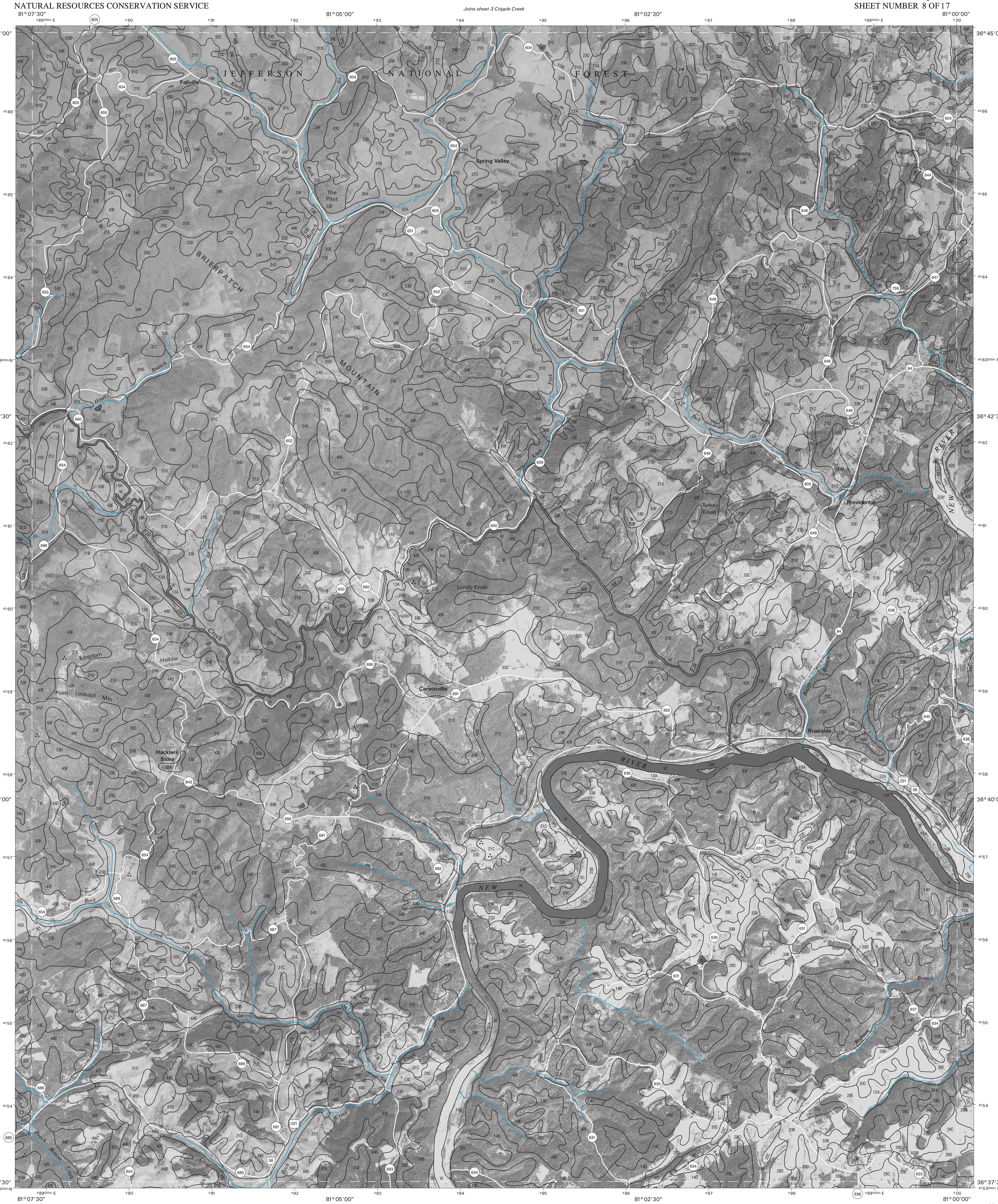
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

GRAYSON COUNTY, VIRGINIA
BRIERPATCH MOUNTAIN QUADRANGLE
SHEET NUMBER 8 OF 17



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North American Datum of 1983 (NAD83). GRS80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 17.
Coordinate grid ticks and land division data, if shown, are approximately positioned. Digital data are available for this quadrangle.

NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

2	3	
7		9
14	15	16

2 SPEEDWELL
3 CRIPPLE CREEK
7 ELK CREEK
9 GALAX
14 SPARTA WEST
15 SPARTA EAST
16 CUMBERLAND KNOB

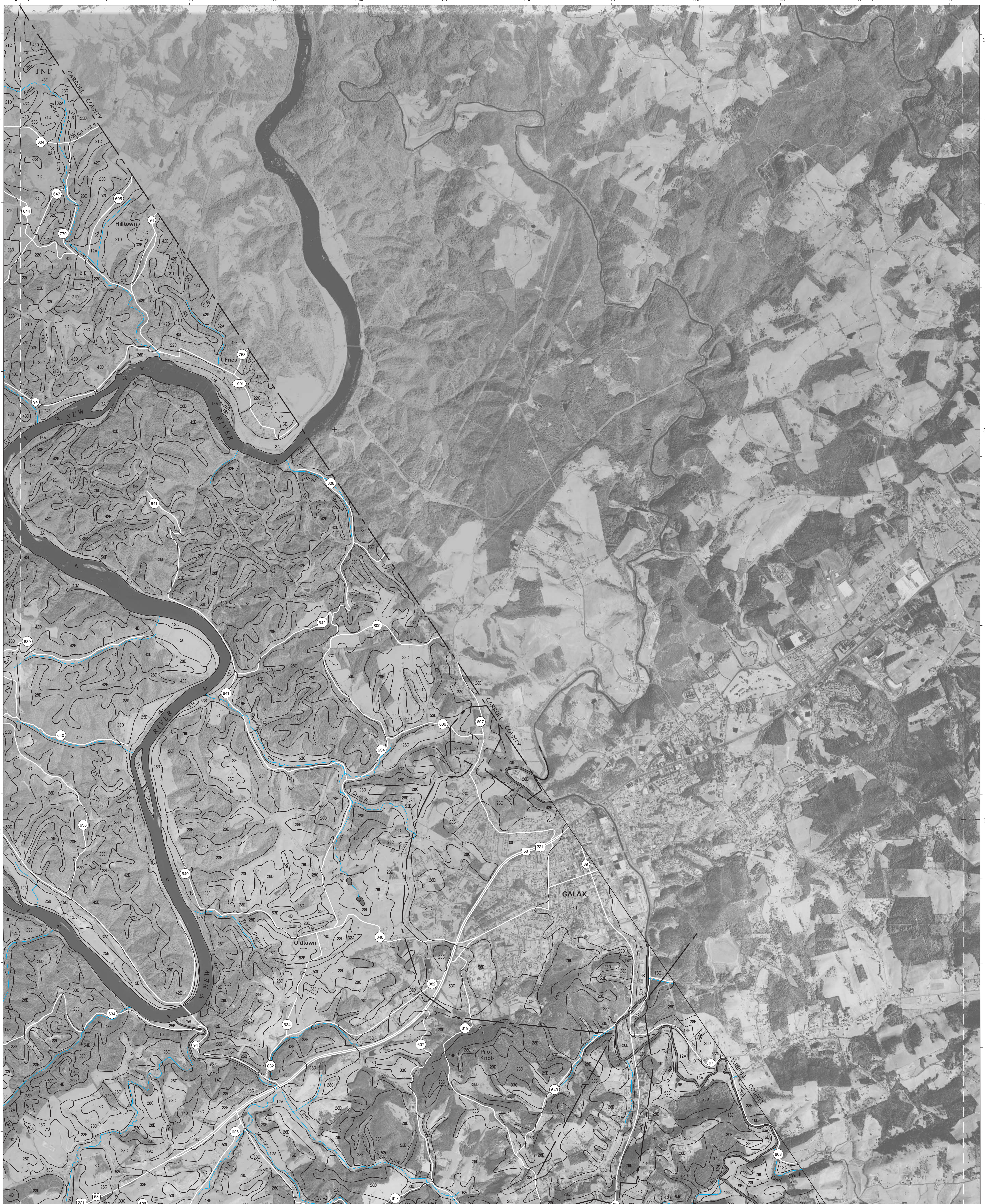
INDEX TO ADJOINING 7.5 MAPS

BRIERPATCH MOUNTAIN, VIRGINIA
7.5 MINUTE SERIES
SHEET NUMBER 8 OF 17

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

GRAYSON COUNTY, VIRGINIA
GALAX QUADRANGLE
SHEET NUMBER 9 OF 17



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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

3		
8		
15	16	17

3 CRIPPLE CREEK
8 BRIERPATCH MOUNTAIN
15 SPARTA EAST
16 CUMBERLAND KNOB
17 LAMBSBURG

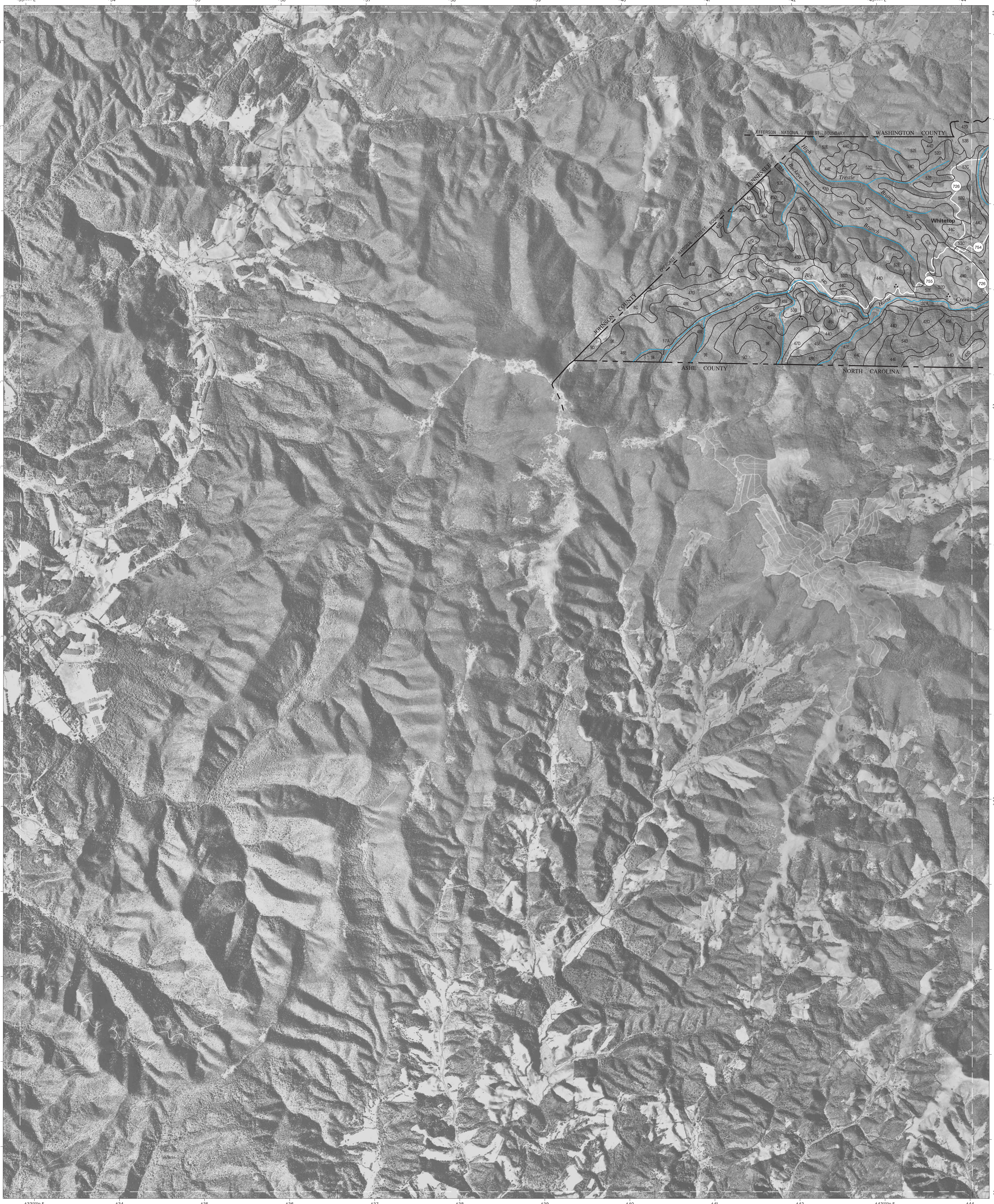
INDEX TO ADJOINING 7.5 MAPS

GALAX, VIRGINIA

7.5 MINUTE SERIES
SHEET NUMBER 9 OF 17

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

Joins sheet 4
Whitetop Mountain



Joins sheet 11 Park

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North American Datum of 1983 (NAD83). GRS80 Spheroid
1000-meter ticks: Universal Transverse Mercator, zone 17.
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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

INDEX TO ADJOINING 7.5 MAPS

4 WHITETOP MOUNTAIN
11 PARK

GRAYSON, VIRGINIA
7.5 MINUTE SERIES
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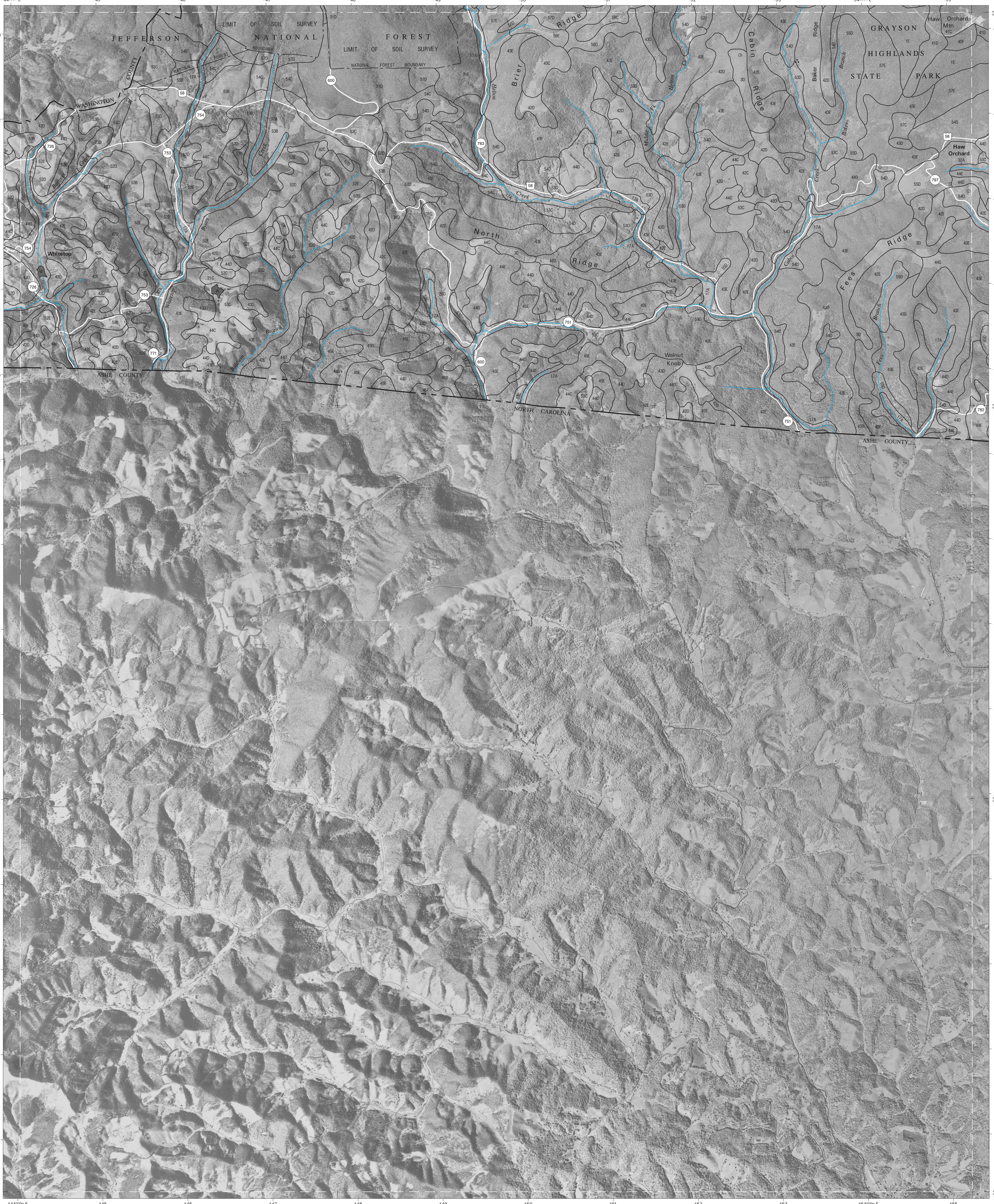
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

GRAYSON COUNTY, VIRGINIA
PARK QUADRANGLE
SHEET NUMBER 11 OF 17



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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

INDEX TO ADJOINING 7.5 MAPS

4 WHITETOP MOUNTAIN
5 TROUT DALE
10 GRAYSON
12 GRASSY CREEK

PARK, VIRGINIA

7.5 MINUTE SERIES
SHEET NUMBER 11 OF 17

Soil map delineations extending beyond the dashed white quadrangle neatline are for reference only and are included on adjacent map sheets.

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DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

GRAYSON COUNTY, VIRGINIA
GRASSY CREEK QUADRANGLE
SHEET NUMBER 12 OF 17

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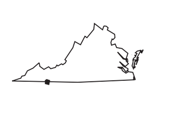
NORTH



QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

4	5	6
11		13

4 WHITETOP MOUNTAIN
5 TROUT DALE
6 MIDDLE FOX CREEK
11 PARK
13 MOUTH OF WILSON

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GRASSY CREEK, VIRGINIA

7.5 MINUTE SERIES
SHEET NUMBER 12 OF 17

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UNITED STATES
DEPARTMENT OF AGRICULTURE
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GRAYSON COUNTY, VIRGINIA
MOUTH OF WILSON QUADRANGLE
SHEET NUMBER 13 OF 17

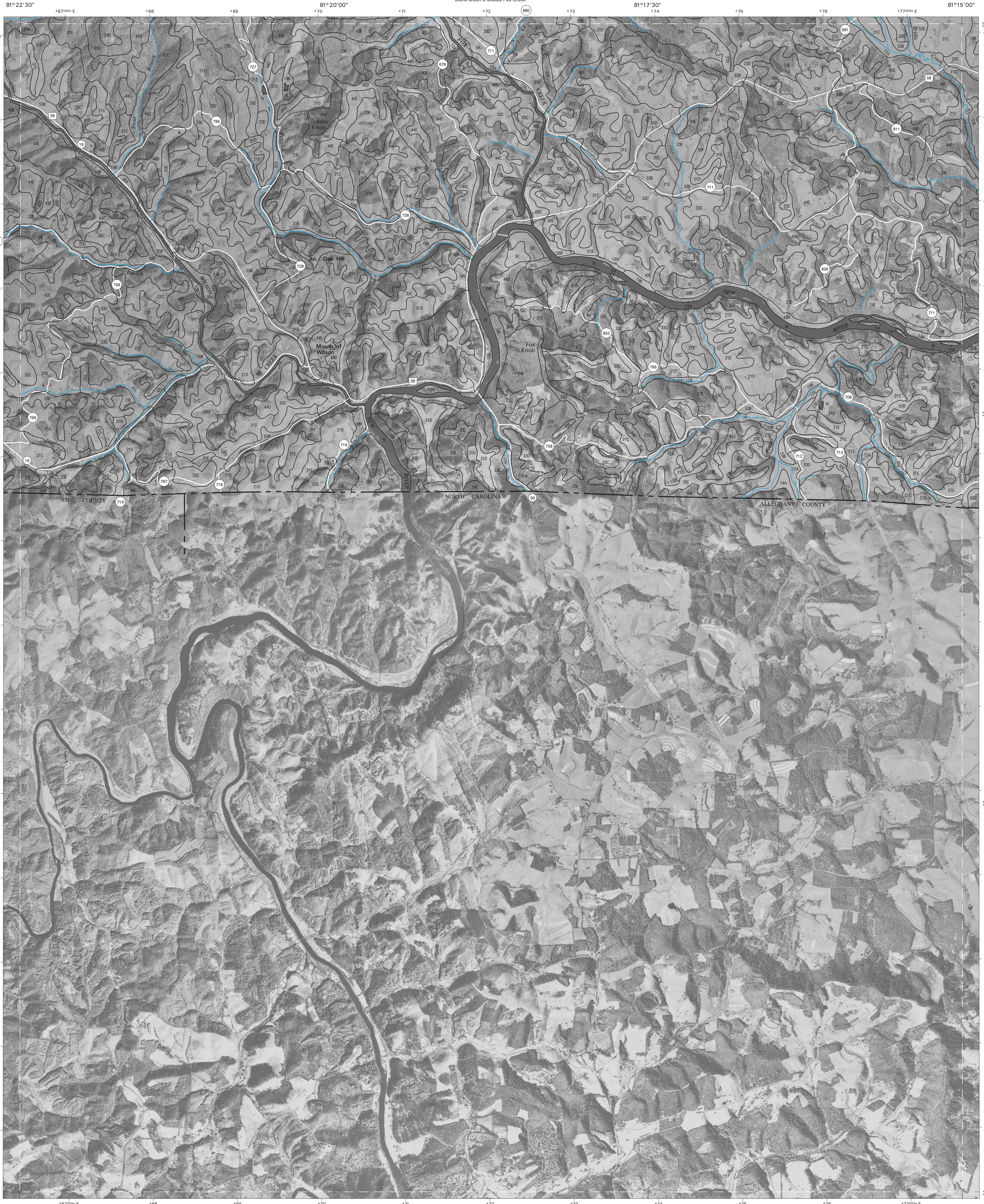
Joins sheet 5 Trout Dale

Joins sheet 6 Middle Fox Creek

Joins sheet 7 Elk Creek

Joins sheet 12 Grassy Creek

Joins sheet 14 Sparta West



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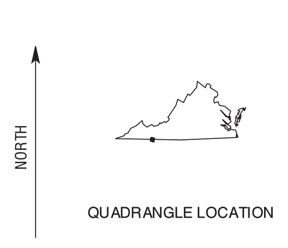

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

5	6	7
12		14

5 TROUT DALE
6 MIDDLE FOX CREEK
7 ELK CREEK
12 GRASSY CREEK
14 SPARTA WEST

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MOUTH OF WILSON, VIRGINIA
7.5 MINUTE SERIES
SHEET NUMBER 13 OF 17

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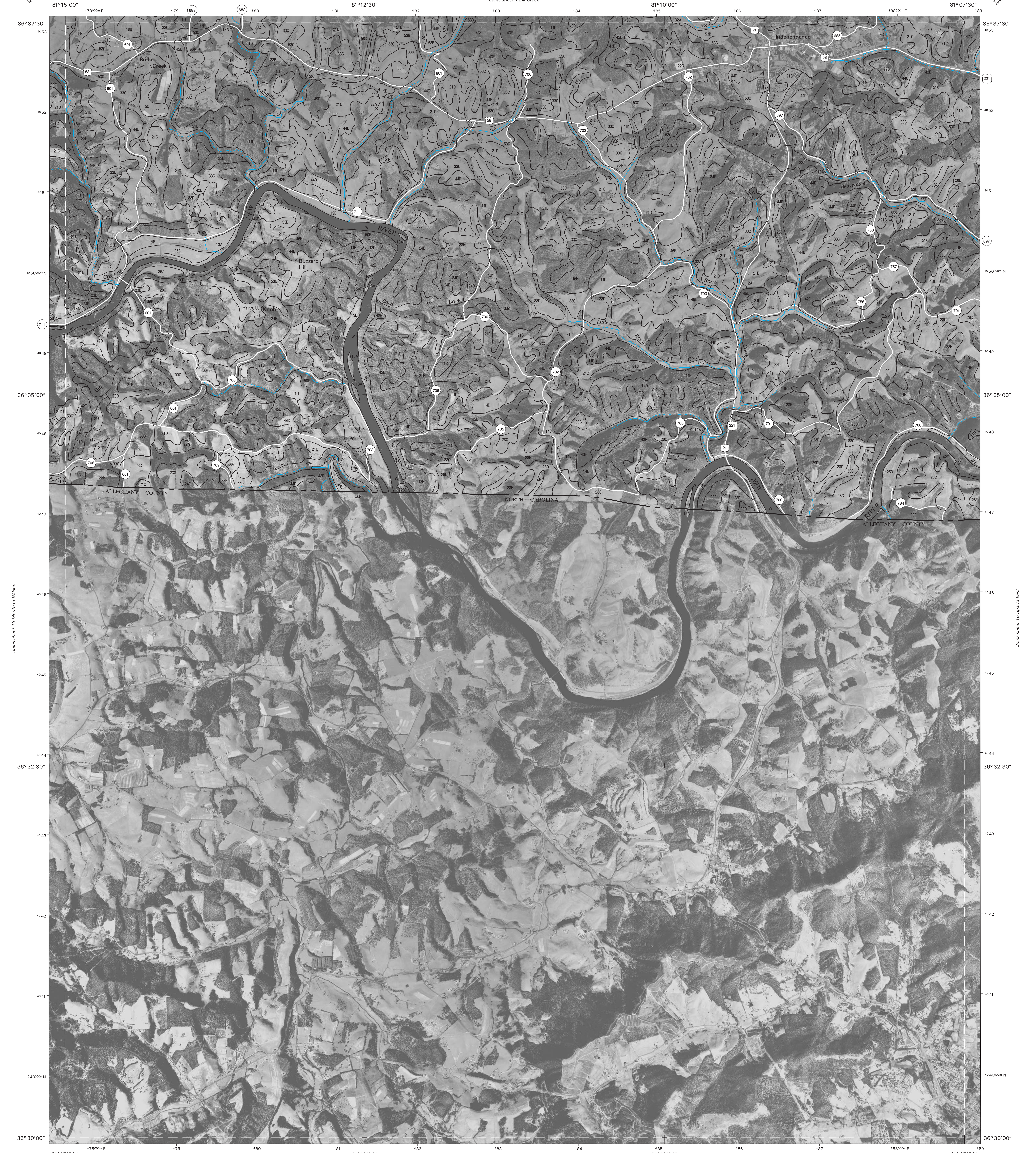
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

GRAYSON COUNTY, VIRGINIA
SPARTA WEST QUADRANGLE
SHEET NUMBER 14 OF 17



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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

6	7	8
13		15

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6 MIDDLE FOX CREEK
7 ELK CREEK
8 BRIERPATCH MOUNTAIN
13 MOUTH OF WILSON
15 SPARTA EAST

SPARTA WEST, VIRGINIA
7.5 MINUTE SERIES
SHEET NUMBER 14 OF 17

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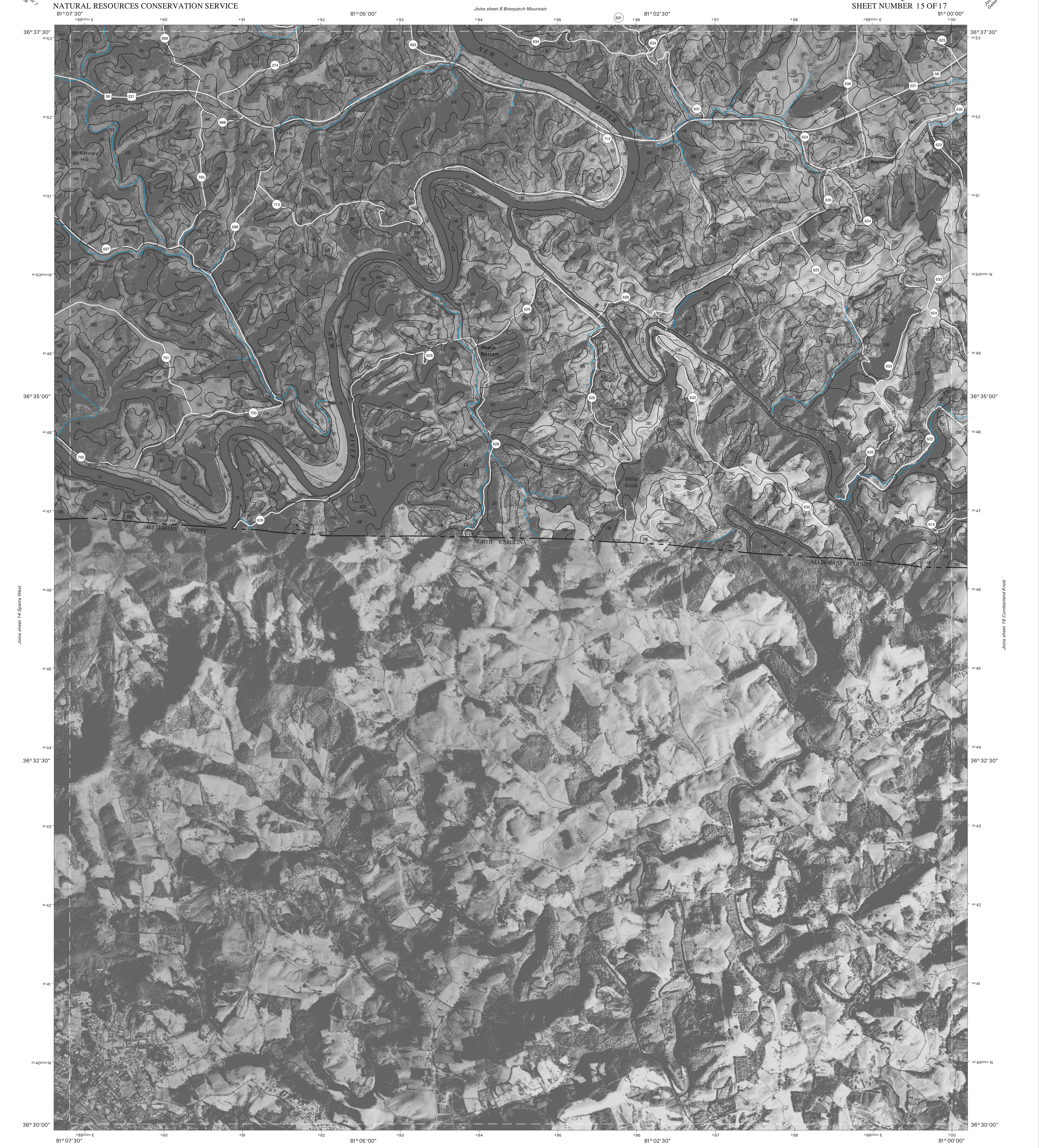
UNITED STATES
DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

GRAYSON COUNTY, VIRGINIA
SPARTA EAST QUADRANGLE
SHEET NUMBER 15 OF 17



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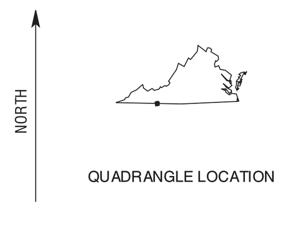
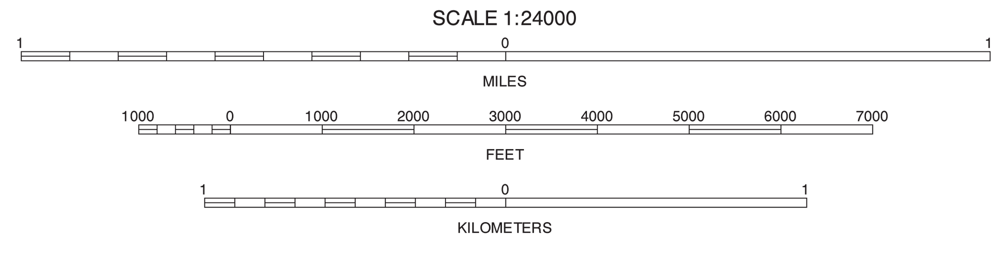


QUADRANGLE LOCATION

SCALE 1:24000



7	8	9
14		16

7 ELK CREEK
8 BRIERPATCH MOUNTAIN
9 GALAX
14 SPARTA WEST
16 CUMBERLAND KNOB

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SPARTA EAST, VIRGINIA
7.5 MINUTE SERIES
SHEET NUMBER 15 OF 17

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UNITED STATES
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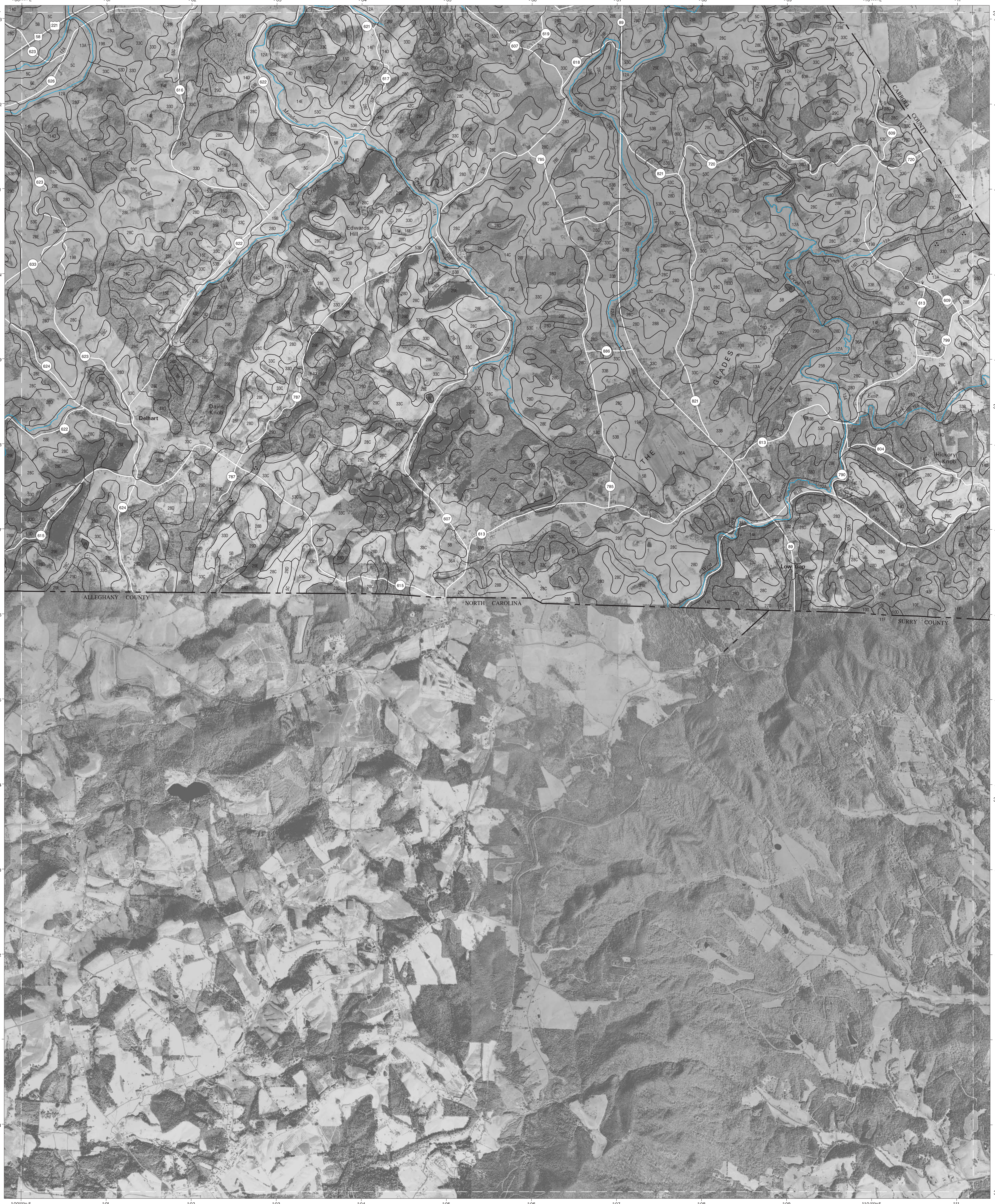
NATURAL RESOURCES CONSERVATION SERVICE

GRAYSON COUNTY, VIRGINIA
CUMBERLAND KNOB QUADRANGLE
SHEET NUMBER 16 OF 17



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NORTH

QUADRANGLE LOCATION

SCALE 1:24000

MILES

FEET

KILOMETERS

8	9	
15		17

8 BRIERPATCH MOUNTAIN
9 GALAX
15 SPARTA EAST
17 LAMBSBURG

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CUMBERLAND KNOB, VIRGINIA
7.5 MINUTE SERIES
SHEET NUMBER 16 OF 17

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UNITED STATES
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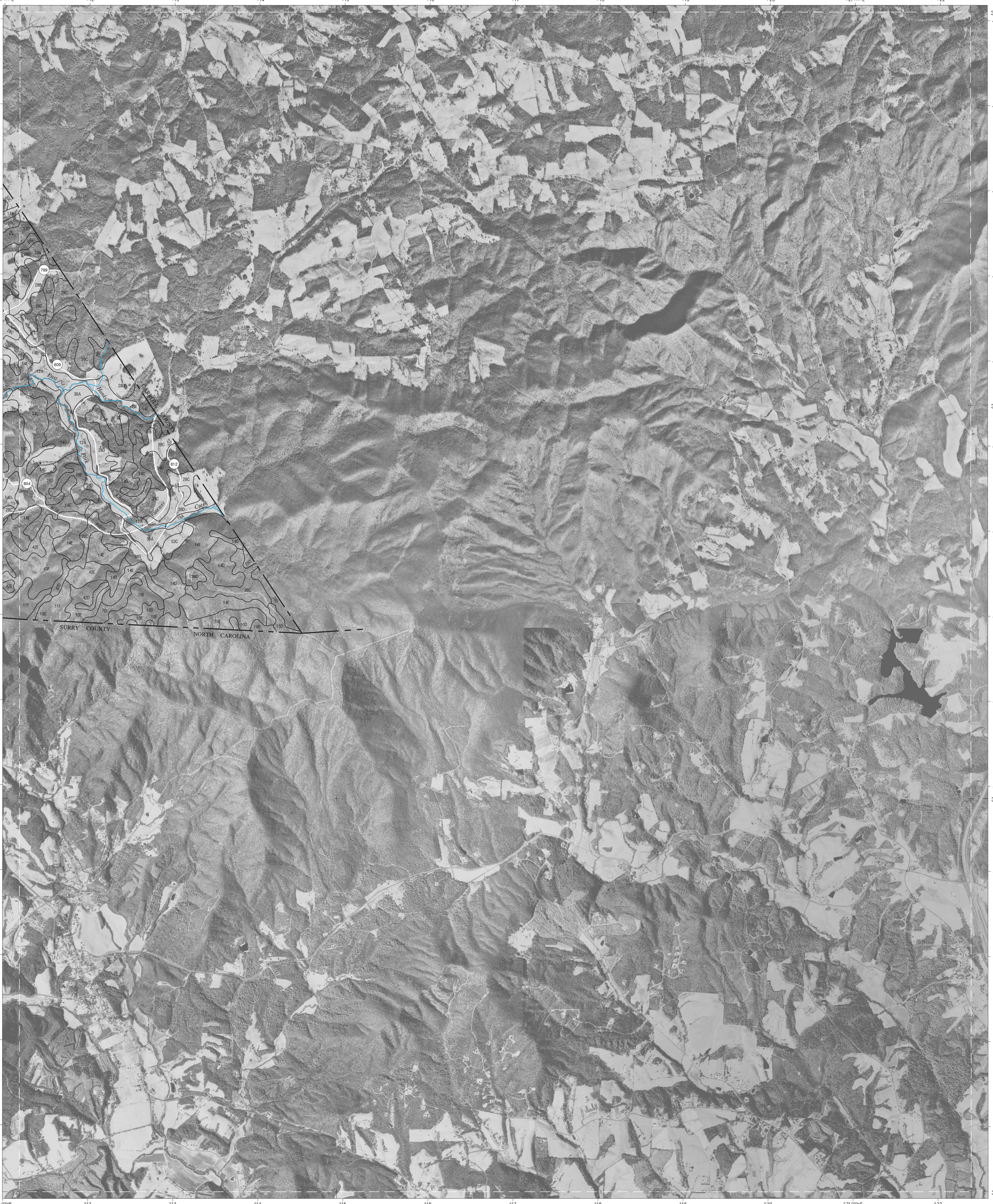
NATURAL RESOURCES CONSERVATION SERVICE

GRAYSON COUNTY, VIRGINIA
LAMBSBURG QUADRANGLE
SHEET NUMBER 17 OF 17



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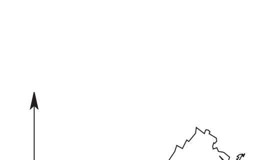


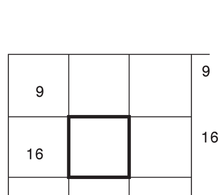
QUADRANGLE LOCATION

SCALE 1:24000

MILES: 1 0 1

FEET: 1000 0 1000 2000 3000 4000 5000 6000 7000

KILOMETERS: 1 0 1



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LAMBSBURG, VIRGINIA

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